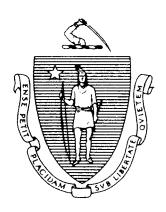
Commonwealth of Massachusetts

Division of Public Employee Retirement Administration



INVESTMENT REPORT

MASSACHUSETTS CONTRIBUTORY RETIREMENT SYSTEMS FOR PUBLIC EMPLOYEES

DECEMBER 31, 1995

WILLIAM F. WELD

Governor

ARGEO PAUL CELLUCCI

Lieutenant Governor

CHARLES D. BAKER

Secretary of Administration and Finance

JOHN J. McGLYNN

Commissioner
Public Employee Retirement Administration

June 12, 1996

In 1995 investors reaped the benefits of record breaking returns in the U.S. markets. Contrasting with the experience of 1994, performance for all asset classes was positive and performance for stocks and bonds was extraordinary. The resulting increase in market value of assets has dramatically improved the fiscal status of many retirement systems.

Massachusetts retirement systems averaged a return of 23.49% in 1995. In the eleven year period from 1985 through 1995 the average annualized return has been 11.43%. That significantly exceeds the assumed rate of return employed in the actuarial valuations of system assets and liabilities. Nationally the Wilshire Associates' Trust Universe Comparison Service's calculations of performance by public pension funds recorded average returns of 24.70% for 1995 and 11.40% for the 1986-1995 period. The 1995 return for the ten largest public pension funds in the U.S. ranged from 30.00% for the New York State Teachers Retirement System to 20.50% for the Ohio Public Employees Retirement System. Clearly, Massachusetts systems have been competitive with public funds nationwide.

As of this writing 1996 stock market returns have been excellent, however, the bond market has not followed stocks to higher levels. In the euphoria associated with the 1995 returns it should be kept in mind that in the 1994 Report returns were generally flat or negative. Thus in one sense the lesson of 1995 is the same as that of 1994, in assessing investment performance the only true measure is long term performance. In that regard Massachusetts' public pension systems have achieved generally excellent returns in the period since the systems were granted broader statutory investment authority. Continued responsible and prudent use of that authority will lead to further investment success and as a result improvements in system funding. I would like to commend PERA's investment unit for a job well done in completing this report and extend my thanks to managers, consultants, custodians and the retirement boards for their assistance.

Sincerely

JOHN J. McGLYNN

Ellen

Commissioner

TABLE OF CONTENTS

PART I:	ANNUAL REPORT OF THE MASSACHUSETTS CONTRIBUTORY RETIREMENT SYSTEMS FOR THE YEAR ENDING DECEMBER 31, 1995
	Table 1: 1995 Returns and Annualized Past Returns 4-7
	Table 2: Historical Annual Returns
PART II:	ASSET GROWTH12
	Table 3: Asset Growth
PART III:	FEES AND TURNOVER
	Table 4: Gross and Net Performance/Management,
	Custodian Bank and Consultant Fees
	Table 5: Portfolio Turnover. 23-26
	%
PART IV:	INVESTMENT MANAGERS, CONSULTANTS AND CUSTODIAN BANKS27-55

PART I:

ANNUAL REPORT OF THE MASSACHUSETTS CONTRIBUTORY RETIREMENT SYSTEMS FOR THE YEAR ENDING DECEMBER 31, 1995

Massachusetts public pension monies are invested by 104 retirement boards, the Pension Reserves Investment Management Board (P.R.I.M.) and the Investment Committee of the State Treasurer's Office. Each retirement board is responsible for the assets of its system while the P.R.I.M. Board invests the pension reserve funds of the Commonwealth as well as the assets of local systems which have purchased shares of the Pension Reserves Investment Trust Fund (P.R.I.T.). The Investment Committee of the State Treasurer's Office invests the annuity accounts of the State Employees' Retirement System and the Teachers' Retirement System. This report will provide a rate of return for the State Employees' Retirement System and the Teachers' Retirement System which includes the performance of the Treasurer's Investment Committee and the Pension Reserves Investment Management Board. Although P.R.I.M. is separately listed, the Treasurer's Office is not. The return on the assets, exclusively the responsibility of the Investment Committee of the State Treasurer's Office in 1995, was 23.50%.

Since 1985 dramatic changes have taken place in the 107 Massachusetts pension funds. These include a substantial growth in assets, professional management of investments, and the adoption of actuarially based funding schedules. As a result, investment activity is one of the key factors in determining appropriations. Failure to achieve the level of return used in the development of the funding schedule will create an actuarial loss. That loss must be made up through appropriation.

This report details investment performance for one year, five years, and the 1985-1995 period. Long term performance is the most important measure of the success or failure of investment strategies. All boards should review the activities of their money managers on a regular basis.

The expected rate of return for many Massachusetts retirement systems is 8.50%. In 1995, the average rate of return was 23.49%, from 1991-1995, the average rate of return was 11.97%, and from 1985-1995, the average rate of return was 11.43%. (See Figures 1 and 2.)

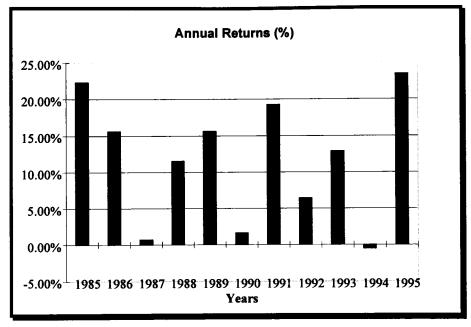


Figure 1

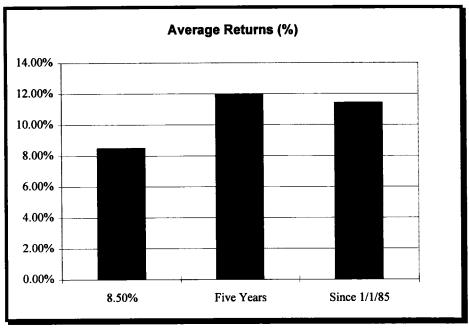


Figure 2

The tables that follow contain this information:

Table One: 1995 Returns and Annualized Past Returns

Table Two: Returns for 1985, through and including 1994

Please note:

• The State Employees' and Teachers' Retirement Systems invest in a trust administered by the Investment Committee of the State Treasurer (MASTERS Trust). The Office of the Treasurer has reported a return of 23.50%. This return differs from that reported in this booklet because the returns reported in this booklet include those assets of the State Employees' and Teachers' Retirement Systems invested with the PRIT Fund.

- PERA employs the generally recognized methodology of the Bank Administration Institute in computing returns.
- Prior to the finalization of performance figures, retirement boards are provided with an opportunity to review the records on which returns are based.
- PERA accounting regulations permit retirement boards to treat separately
 managed international advisors as pooled fund investments. PERA's Investment
 Unit generally also treats such investments as pooled funds for accounting
 purposes.

The following is a list of retirement systems which did not provide PERA with all of the required accounting information for 1995. PERA utilized available information, but information not submitted may impact certain statistics contained in this report including rates of return, fees, market value, and portfolio turnover.

- Woburn. Board did not submit trial balances and submitted cashbooks which did not reflect investment activity. PERA utilized bank statements for investment accounting but was unable to record non-investment cash flows.
- Clinton. Board did not submit complete pooled fund statements for all of their investments in pooled funds. PERA was therefore unable to account for the transactions for each pooled fund investment.
- Plymouth County. Board did not account for the investment activity for three (3) domestic managers retained in 1995 as required by PERA accounting standards.
 PERA used custodian bank statements for these investment managers along with board's cashbooks to record accounting data.

Annual Report of the Massachusetts Contributory Retirement Systems for the year ending December 31, 1995

Table One

1995 Returns and Annualized Past Returns

Page One

	199	95	Five Y	Years	Since Janu	ary 1985
Retirement System	Return	Rank	Return	Rank	Return	Rank
ADAMS	23.62	52	11.56	60	10.97	55
AMESBURY	20.42	100	11.06	84	10.32	86
ANDOVER	22.33	80	11.55	61	11.07	49
ARLINGTON	27.61	3	12.14	2 8	11.69	23
ATHOL	16.29	107	8.34	107	9.58	96
ATTLEBORO	22.79	76	10.81	89	10.85	64
BARNSTABLE COUNTY	23.56	56	11.05	85	8.93	101
BELMONT	26.93	6	13.23	8	11.15	45
BERKSHIRE COUNTY	24.40	27	12.17	25	11.04	50
BEVERLY	25.17	19	11.83	43	10.29	88
BLUE HILLS REG VO	25.90	10	12.45	18	10.76	67
BOSTON	23.14	68	12.57	12	11.60	28
BRAINTREE	20.45	99	10.12	101	10.99	53
BRISTOL COUNTY	25.28	18	11.13	79	10.41	82
BROCKTON	23.05	71	13.24	7	10.88	62
BROOKLINE	26.35	9	13.62	3	11.52	30
CAMBRIDGE	2 5.71	11	12.41	19	11.20	41
CHELSEA	24.25	30	11.36	70	10.97	56
CHICOPEE	23.88	40	12.10	30	10.89	61
CLINTON	16.51	106	10.35	95	9.08	98
CONCORD	22.33	81	11.99	34	11.13	46
DANVERS	20.86	98	11.18	74	10.56	76
DEDHAM	24.10	32	11.88	39	11.46	33
DUKES COUNTY	21.49	90	9.49	106	8.42	106
EASTHAMPTON	19.23	104	9.90	104	11.18	43
ESSEX COUNTY	23.17	66	11.61	58	11.52	31
EVERETT	25.64	14	12.47	17	11.83	15

	199	95	Five !	Years	Since January 1985	
Retirement System	Return	Rank	Return	Rank	Return	Rank
FAIRHAVEN	23.53	57	11.75	50	11.00	52
FALL RIVER	23.62	53	11.37	69	11.65	26
FALMOUTH	30.87	1	12.71	11	12.13	7
FITCHBURG	21.21	91	10.32	96	10.24	90
FRAMINGHAM	25.55	15	12.79	9	11.51	32
FRANKLIN COUNTY	22.46	78	11.17	75	9.80	95
GARDNER	24.07	34	11.81	45	11.11	47
GLOUCESTER	25.68	12	12.38	20	12.05	8
GREATER LAWRENCE	21.00	94	10.74	90	8.47	105
GREENFIELD	20.03	102	11.13	80	10.45	81
HAMPDEN COUNTY	23.67	49	11.92	38	11.25	38
HAMPSHIRE COUNTY	21.96	84	11.58	59	10.72	70
HAVERHILL	23.61	54	12.17	26	11.80	18
HINGHAM	23.72	48	11.50	63	10.76	68
HOLYOKE	25.08	20	12.27	22	12.31	4
HULL	18.07	105	9.69	105	9.02	99
LAWRENCE	23.59	55	10.99	86	10.38	83
LEOMINSTER	22.96	72	10.25	100	10.35	85
LEXINGTON	26.47	8	13.33	5	11.80	19
LOWELL	23.29	62	11.71	53	10.59	74
LYNN	24.28	28	11.39	68	10.71	71
MALDEN	22.74	77	12.29	21	10.93	59
MARBLEHEAD	24.01	36	13.25	6	10.97	57
MARLBOROUGH	21.00	95	11.51	62	10.87	63
MASS HOUSING FINA	23.48	59	10.32	97	8.83	103
MASS PORT AUTH	20.87	97	11.42	67	12.30	5
MASS TURNPIKE AUT	21.59	88	10.11	102	11.25	39

	19	95	Five Y	lears	Since January 1985	
Retirement System	Return	Rank	Return	Rank	Return	Rank
MASS WATER RESOUR	20.01	103	10.31	98	N/A	N/A
MAYNARD	23.27	63	10.37	94	8.94	100
MEDFORD	22.87	74	10.95	87	10.94	58
MELROSE	20.27	101	11.08	81	11.23	40
METHUEN	24.86	23	11.08	82	10.31	87
MIDDLESEX COUNTY	22.16	82	12.74	10	11.94	13
MILFORD	21.71	87	11.70	54	10.10	93
MILTON	24.07	35	11.93	37	11.33	36
MINUTEMAN REG VO	23.75	45	11.68	57	11.42	35
MONTAGUE	23.66	50	11.83	44	10.36	84
NATICK	26.51	7	12.49	16	12.03	9
NEEDHAM	23.93	37	11.87	40	11.97	11
NEW BEDFORD	23.17	67	11.15	77	8.78	104
NEWBURYPORT	20.91	96	11.20	73	10.12	91
NEWTON	24.71	25	13.45	4	11.10	48
NORFOLK COUNTY	22.43	79	10.93	88	11.54	29
NORTH ADAMS	23.52	58	11.70	55	10.81	66
NORTH ATTLEBORO	21.13	92	11.43	66	10.50	79
NORTHAMPTON	23.66	51	11.79	48	10.50	80
NORTHBRIDGE	23.90	39	11.80	46	10.90	60
NORWOOD	25.01	21	11.17	76	11.20	42
PEABODY	25.65	13	12.56	13	11.72	22
PITTSFIELD	23.74	46	11.99	35	11.17	44
PLYMOUTH	25.38	17	12.02	33	11.92	14
PLYMOUTH COUNTY	23.21	65	12.56	14	11.66	24
PRIM BOARD	24.13	31	11.74	52	11.95	12
QUINCY	23.41	60	11.87	41	9.88	94

	199) 5	Five '	Years	Since January 1985	
Retirement System	Return	Rank	Return	Rank	Return	Rank
READING	24.10	33	11.86	42	10.74	69
REVERE	23.22	64	10.08	103	8.92	102
SALEM	23.11	69	11.45	64	10.62	72
SAUGUS	23.79	43	11.75	51	10.57	75
SHREWSBURY	24.55	26	10.49	92	10.99	54
SOMERVILLE	22.82	75	11.14	78	10.26	89
SOUTHBRIDGE	23.73	47	12.51	15	10.51	78
SPRINGFIELD	22.95	73	12.21	23	11.62	27
STATE	23.86	42	12.07	32	11.77	21
STATE TEACHERS	23.87	41	12.11	29	11.81	17
STONEHAM	21.80	86	10.45	93	11.03	51
SWAMPSCOTT	22.05	83	11.27	72	11.26	37
TAUNTON	21.56	89	11.80	47	12.75	2
WAKEFIELD	23.93	38	11.76	49	11.83	16
WALTHAM	24.88	22	12.18	24	12.00	10
WATERTOWN	23.76	44	11.69	56	10.55	77
WEBSTER	27.15	5	11.45	65	9.45	97
WELLESLEY	27.74	2	15.06	1	13.67	. 1
WEST SPRINGFIELD	21.02	93	10.54	91	10.12	92
WESTFIELD	23.07	70	12.08	31	11.44	34
WEYMOUTH	24.26	29	11.94	36	12.58	3
WINCHESTER	24.78	24	12.16	27	11.66	25
WINTHROP	27.58	4	13.64	2	11.79	20
WOBURN	25.41	16	11.35	71	12.23	6
WORCESTER	21.87	85	11.08	83	10.83	65
WORCESTER COUNTY	23.31	61	10.30	99	10.61	73

Annual Report of the Massachusetts Contributory Retirement Systems for the year ending December 31, 1995

Table Two		<u> </u>	listorical	Annual	Returns			22		Page One
Retirement System	1994 Return	1993 Return	1992 <u>Return</u>	1991 Return	1990 Return	1989 Return	1988 Return	1987 Return	1986 Return	1985 <u>Return</u>
ADAMS	-0.46	9.19	9.04	17.97	5.37	11.52	6.58	5.35	9.14	26.30
AMESBURY	-1.53	12.12	6.36	19.50	5.21	14.00	10.95	0.23	10.19	18.62
ANDOVER	-5.21	2.91	1.08	43.23	-0.12	13.26	10.18	0.95	15.15	26.79
ARLINGTON	-0.83	9.83	8.33	17.80	3.11	15.81	10.23	3.11	16.64	20.13
ATHOL	-2.10	6.48	6.50	15.63	7.91	14.09	9.00	3.72	9.82	19.90
ATTLEBORO	-3.04	10.44	6.48	19.32	5.27	19.11	6.92	2.48	12.91	19.87
BARNSTABLE COUNTY	-1.07	9.21	7.45	17.72	-1.32	9.15	9.14	-5.48	12.69	21.15
BELMONT	-1.36	11.45	10.44	20.76	0.41	17.03	10.95	-2.90	9.59	23.88
BERKSHIRE COUNTY	-1.04	11.35	9.49	18.31	5.08	10.49	9.17	1.83	13.25	21.92
BEVERLY	-1.50	9.47	5.66	22.64	1.65	10.28	10.64	-0.71	12.97	20.71
BLUE HILLS REG VO	-2.50	11.41	9.84	19.67	3.83	15.39	9.51	3.09	13.35	11.67
BOSTON	0.75	13.74	5.41	21.53	-2.82	20.36	12.73	-3.78	16.12	25.65
BRAINTREE	-0.61	7.94	7.42	16.64	2.68	13.84	10.59	5.18	16.41	22.88
BRISTOL COUNTY	-3.14	10.35	6.22	19.18	6.01	15.18	7.70	-1.20	11.43	21.05
BROCKTON	-1.81	18.10	8.57	20.22	-0.91	11.62	8.12	1.63	12.47	22.38
BROOKLINE	-1.75	12.41	10.01	23.33	1.54	19.78	9.81	0.95	11.78	16.24
CAMBRIDGE	-1.05	13.33	9.74	16.01	0.02	10.95	7.91	-2.86	16.69	31.96
CHELSEA	-4.09	11.05	6.45	21.55	5.70	14.75	9.43	-1.82	13.48	24.06
CHICOPEE	-2.02	13.09	8.60	18.74	4.39	13.10	12.42	-0.18	10.53	20.23
CLINTON	-0.67	11.17	8.01	17.73	-0.18	7.65	7.81	-5.31	12.45	28.89
CONCORD	-1.18	11.57	8.47	20.41	4.48	17.24	10.48	3.68	10.67	16.77
DANVERS	-1.95	11.97	6.57	20.13	5.79	14.05	10.57	1.70	9.84	19.13
DEDHAM	0.54	16.08	4.84	15.46	-1.64	16.43	9.98	3.61	12.67	27.93
DUKES COUNTY	-1.13	10.50	6.91	10.89	-1.61	8.31	12.01	-4.55	10.68	22.68
EASTHAMPTON	-2.34	8.37	7.80	17.85	8.20	16.51	12.83	1.99	14.07	20.94
ESSEX COUNTY	-0.46	11.40	8.43	16.93	4.56	13.07	11.87	-1.19	17.16	25.17
EVERETT	-3.43	12.24	7.07	23.43	5.57	20.01	6.85	0.98	13.56	22.43

Retirement System	1994 Return	1993 Return	1992 Return	1991 Return	1990 <u>Return</u>	1989 Return	1988 Return	1987 <u>Return</u>	1986 Return	1985 Return
FAIRHAVEN	0.82	15.70	4.88	15.31	-1.44	16.59	13.29	4.19	9.68	21.53
FALL RIVER	-3.63	11.28	5.91	22.01	6.14	18.03	6.41	1.94	15.35	25.14
FALMOUTH	1,14	4.32	6.32	23.87	7.09	21.10	9.76	2.30	12.41	18.37
FITCHBURG	-1.54	7.32	5.43	21.00	5.24	17.14	10.40	1.32	12.41	15.35
FRAMINGHAM	-3.04	14.57	8.32	20.85	4.94	13.53	9.55	2.63	13.56	19.37
FRANKLIN COUNTY	-1.49	10.71	8.51	17.18	5.61	11.95	9.51	-0.24	7.73	18.34
GARDNER	0.66	15.94	4.82	15.13	-1.22	16.97	13.41	3.16	12.94	19.45
GLOUCESTER	-0.65	11.28	9.17	18.15	3.89	13.23	13.68	-0.45	16.57	2 5.69
GREATER LAWRENCE	-3.01	10.70	8.02	18.70	3.80	11.36	8.13	1.71	7.28	7.69
GREENFIELD	-3.41	12.06	10.33	18.23	5.92	15.28	8.34	0.30	13.19	17.23
HAMPDEN COUNTY	-0.73	11.48	8.70	18.05	2.24	15.12	11.37	2.03	13.89	20.78
HAMPSHIRE COUNTY	0.19	13.99	7.75	15.24	4.88	14.16	8.25	4.40	11.73	17.17
HAVERHILL	-0.29	9.68	9.19	20.32	1,30	13.43	13.40	2.87	16.80	22.71
HINGHAM	0.64	15.64	4.78	14.23	-1.32	14.69	10.89	0.95	15.32	22.28
HOLYOKE	-0.71	11.63	8.60	18.50	3.50	13.13	12.85	4.23	14.15	27.88
HULL	0.19	8.12	7.93	15.01	3.23	9.39	9.79	0.57	11.36	17.28
LAWRENCE	-6.17	11.91	2.03	27.20	3.22	19.04	5.44	-2.18	12.24	23.67
LEOMINSTER	-2.80	8.83	6.67	17.39	5.19	13.93	10.03	2.47	12.21	19.64
LEXINGTON	-0.66	10.17	8.20	24.85	2.05	13.48	9.57	-0.91	15.67	25.47
LOWELL	3.72	8.10	7.94	16.60	1.39	11.92	7.32	3.74	14.50	20.21
LYNN	-6.05	8.50	1.39	33.49	0.12	17.50	11.62	-1.95	12.20	23.66
MALDEN	-4.78	9.12	2.87	36.08	0.21	20.33	11.98	-2.94	9.38	22.27
MARBLEHEAD	-0.19	8.97	2.04	35.37	0.81	18.96	10.61	-3.24	7.88	21.90
MARLBOROUGH	-0.14	11.34	8.54	18.05	4.21	14.08	14.11	-0.71	9.91	21.89
MASS HOUSING FINA	-2.11	11.89	4.80	15.28	-1.67	16.84	13.80	-0.90	9.39	9.58
MASS PORT AUTH	-1.32	10.71	7.91	20.51	4.32	19.14	11.34	3.93	18.68	22 .18
MASS TURNPIKE AUT	-0.81	7.86	7.81	15.38	6.88	14.03	10.78	3.15	16.90	22.68

Retirement System	1994 <u>Return</u>	1 993 <u>Return</u>	1992 Return	1991 <u>Return</u>	1990 <u>Return</u>	1989 Return	1988 <u>Return</u>	1987 <u>Return</u>	1986 Return	1985 <u>Return</u>
MASS WATER RESOUR	-3.37	12.10	7.00	17.42	-1.02	14.60	10.66	6.32	5.78	N/A
MAYNARD	-3.67	11.55	7.68	14.80	-3.33	5.94	7.72	1.10	9.91	27.80
MEDFORD	-0.63	10.09	8.47	15.31	5.07	14.70	10.00	1.41	15.12	20.35
MELROSE	-0.68	12.09	7.76	17.22	3.12	16.27	10.35	2.11	16.48	21.15
METHUEN	-2.15	11.51	7.44	15.52	2.43	13.21	8.16	1.87	13.51	20.03
MIDDLESEX COUNTY	0.38	13.49	7.25	22.06	1.83	16.33	11.16	2.06	14.89	22.92
	2.00	. 44 50	0.40	00.00		10.05	0.05	4.00	8.98	19.66
MILFORD	-2.08	11.59	6.12	23.20	5.77	16.95	8.05	-4.86	10.93	
MILTON	0.84	16.01	4.88	15.42	-1.59	16.88	13.49	4.46	10.93 22.05	22.53
MINUTEMAN REG VO	0.66	15.91	4.89	14.70	-1.55	16.90	13.87	4.49		13.17
MONTAGUE	0.78	15.67	4.86	15.68	-1.34	16.39	13.56	4.86	9.15	13.28
NATICK	-0.49	8.02	9.03	21.50	3.47	17.21	10.91	-0.09	14.56	25.80
NEEDHAM	0.95	15.90	4.78	15.32	-1.55	16.84	13.83	4.67	20.76	19.58
NEW BEDFORD	-1.61	9.14	6.03	20.95	-3.36	10.07	8.04	-6.31	13.68	21.48
NEWBURYPORT	-2.12	11.98	5.98	21.03	5.07	13.61	10.32	-1.62	9.18	20.08
NEWTON	-1.46	15.08	8.23	22.80	-4.57	16.02	13.60	-3.83	14.33	22.46
NORFOLK COUNTY	-0.71	14.55	4.82	15.08	-1.16	16.62	13.42	4.14	17.47	23.77
NORTH ADAMS	-4.94	8.27	3.96	31.57	2.31	19.79	9.31	-2.33	9.84	23.80
NORTH ATTLEBORO	2.60	10.50	5.86	18.19	3.07	15.93	9.60	0.57	12.66	17.64
NORTHAMPTON	-4.69	7.89	3.70	32.38	2,24	18.12	11.28	-6.82	12.44	22.07
NORTHBRIDGE	0.43	16.01	4.92	15.30	-1.51	16.99	13.50	3.78	10.34	19.33
NORWOOD	-0.73	11.39	6.84	14.96	6.60	17.01	11.22	2.83	13.30	17.17
PEABODY	-0.21	12.54	8.56	17.96	3.01	13.43	12.77	-0.41	15.77	23.23
PITTSFIELD	-0.36	11.58	8.66	17.85	4.79	15.12	9.54	-1.81	13.05	24.07
PLYMOUTH	1.56	3.30	7.49	24.77	6.89	16.18	8.33	-2.04	15.73	28.32
ILIMOUIII	1.00	0.00	1.43	<u>⊿</u> ∓.11	0.03	10.10	0.00	2.01		
PLYMOUTH COUNTY	5.17	8.04	8.92	18.49	4.08	12.83	10.46	-1.30	16.71	24.66
PRIM BOARD	0.41	16.31	4.77	14.69	-2.27	17.90	13.43	3.25	19.94	22.76
QUINCY	-1.29	10.66	9.14	19.07	4.09	13.43	6.36	-4.66	13.30	18.62

Retirement System	1994 <u>Return</u>	1993 Return	1992 Return	1991 <u>Return</u>	1990 Return	1989 Return	1988 Return	1987 Return	1986 <u>Return</u>	1985 <u>Return</u>
READING	0.54	15.96	4.87	15.43	-1.67	16.91	11.71	-2.77	10.73	26.85
REVERE	-2.08	7.81	7.42	15.65	3.71	8.79	9.26	2.40	9.66	14.44
SALEM	-0.57	10.66	6.92	18.73	3.31	12.86	7.39	2.99	14.57	19.46
SAUGUS	0.72	15.80	5.00	14.94	-1.32	16.55	13.50	3.98	11.50	14.53
SHREWSBURY	-1.68	11.42	4.80	15.19	-1.68	16.87	13.81	4.42	19.33	17.28
SOMERVILLE	-1.14	9.76	5.91	20.13	0.94	13.07	10.79	-7.08	13.14	29.94
SOUTHBRIDGE	0.45	12.92	9.07	17.76	3.55	6.77	7.82	-2.85	16.06	23.91
SPRINGFIELD	-1.50	11.46	7.25	22.90	5.76	19.93	8.54	-1.18	14.91	20.45
STATE	-0.30	14.85	5.53	18.10	0.44	15.70	12.67	1.89	16.17	24.10
STATE TEACHERS	-0.17	13.86	6.14	18.53	1.95	15.64	12.54	0.96	16.03	24.01
STONEHAM	-1.21	8.10	7.89	17.15	3.41	16.13	8.63	2.37	16.38	23.69
SWAMPSCOTT	-4.79	10.42	2.09	30.22	2.37	18.93	14.25	-3.90	10.87	27.94
TAUNTON	-1.18	13.02	8.26	18.85	5.49	16.83	10.64	6.06	20.07	23.41
WAKEFIELD	0.66	15.84	4.82	15.11	-1.48	16.04	13.34	4.43	21.13	19.76
WALTHAM	-2.92	11.21	8.17	21.82	4.46	20.97	7.18	1.40	16.65	22.20
WATERTOWN	0.88	10.96	6.23	18.10	0.21	13.10	12.25	1.29	12.23	19.89
WEBSTER	2.05	8.36	3.94	17.65	-0.92	5.43	7.10	3.36	13.46	19.71
WELLESLEY	-2.42	18.07	8.96	25.78	2.66	17.64	12.46	3.23	17.91	22.73
WEST SPRINGFIELD	-1.61	7.75	8.73	18.34	4.30	16.51	10.63	1.07	11.20	15.79
WESTFIELD	-2.36	13.96	8.87	18.66	5.11	16.86	8.11	0.77	15.59	20.29
WEYMOUTH	1.13	15.69	4.69	15.48	-1.49	16.69	13.33	4.53	20.02	28.19
WINCHESTER	-0.53	10.36	9.29	18.58	5.51	15.75	9.62	0.01	15.27	22.77
WINTHROP	1.14	13.52	7.87	19.91	3.41	16.58	10.05	-0.24	14.67	18.51
WOBURN	-2.63	11.36	8.66	15.86	5.62	13.06	8.56	-0.50	21.69	32.44
WORCESTER	-1.34	13.14	7.98	15.11	1.56	14.39	12.22	1.78	15.81	19.25
WORCESTER COUNTY	-2.34	8.14	7.87	16.21	3.72	10.30	8.59	1.40	16.05	27.06

PART II:

ASSET GROWTH

As of December 31, 1995 assets of Massachusetts' Retirement Systems had a market value of \$22.70 billion. (See Figures 3 and 4.) Assets of the two state funds totalled \$14.92 billion and assets of local retirement systems totalled \$7.78 billion. State funds increased by \$3.03 billion in 1995, and local assets increased by \$1.52 billion.

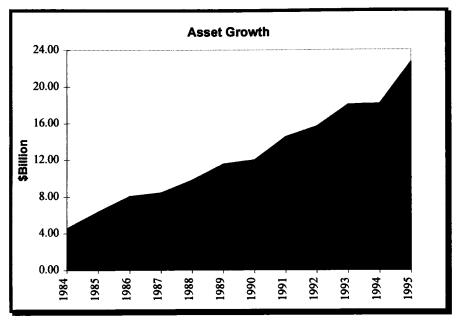


Figure 3

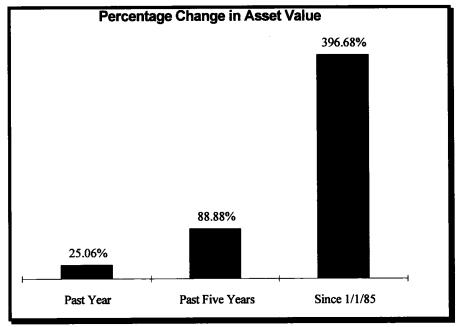


Figure 4

Annual Report of the Massachusetts Contributory Retirement Systems for the year ending December 31, 1995

Table Three			Page One					
	December 31	, 1995	************		Percen	t Chang	{e	•••••
	Total Asset V	•	Past Y		Past Five		Since January	
Retirement System	<u>Market</u>	Rank	Percent	Rank	<u>Percent</u>	Rank	Percent	Rank
ADAMS	10,774,577.02	95	25.07	47	92.73	40	447.01	11
AMESBURY	15,554,210.35	89	20.75	97	65.21	88	353.14	37
ANDOVER	31,126,655.67	63	27.00	25	95.87	33	423.92	13
ARLINGTON	71,285,361.26	32	25.14	45	71.31	79	266.38	75
ATHOL	6,881,557.57	102	20.38	100	61.34	96	271.26	71
ATTLEBORO	27,998,249.29	73	24.37	59	74.51	74	310.32	56
BARNSTABLE COUNTY	158,448,944.73	13	31.16	8	146.74	3	434.63	12
BELMONT	31,252,684.44	62	22.26	84	60.49	97	202.80	103
BERKSHIRE COUNTY	42,172,129.78	50	27.84	20	112.13	10	391.85	23
BEVERLY	34,735,847.87	59	24.96	49	58.71	99	243.40	88
BLUE HILLS REG VO	4,073,892.83	107	24.21	61	58.32	100	218.89	98
BOSTON	1,776,148,026.76	4	22.14	85	87.32	51	319.16	48
BRAINTREE	53,941,134.27	41	26.06	31	66.99	85	401.56	21
BRISTOL COUNTY	125,221,806.27	16	31.90	7	99.19	28	347.46	42
BROCKTON	101,441,259.54	21	22.38	82	72.25	77	223.14	97
BROOKLINE	95,017,121.77	23	25.46	36	84.97	55	281.95	63
CAMBRIDGE	230,127,787.89	6	31.10	9	108.81	13	343.08	44
CHELSEA	26,086,499.73	74	21.52	90	50.78	103	211.52	102
CHICOPEE	64,260,647.24	34	24.72	56	80.58	63	233.19	93
CLINTON	8,197,993.80	99	17.80	106	82.21	61	228.30	95
CONCORD	33,775,567.96	60	23.21	71	162.41	1	462.49	6
DANVERS	41,295,165.32	51	23.18	72	81.25	62	260.41	78
DEDHAM	25,357,394.02	75	29.29	13	113.48	8	371.99	29
DUKES COUNTY	13,706,887.24	93	30.86	10	153.32	2	451.76	9
EASTHAMPTON	11,859,512.96	94	18.02	105	66.30	86	407.81	18
ESSEX COUNTY	107,569,808.38	19	26.19	28	109.57	12	353.86	36
EVERETT	38,700,783.67	56	21.94	87	60.03	98	193.33	105

	December 31 Total Asset V	•	Past Year Past Five Years Since January 1, 1							
Retirement System	Market	Rank	Percent		Percent	Rank	Percent	Rank		
FAIRHAVEN	9,711,021.02	96	19.83	101	79.44	65	283.92	62		
FALL RIVER	119,452,964.30	· 17	30.39	11	86.26	52	368.63	32		
FALMOUTH	30,750,587.04	64	33.71	5	113.65	7	517.46	. 4		
FITCHBURG	40,862,383.07	53	20.95	95	64.73	91	312.75	51		
FRAMINGHAM	73,425,846.45	31	33.73	4	105.81	18	360.95	35		
FRANKLIN COUNTY	23,812,803.85	78	32.75	6	98.99	30	349.95	41		
GARDNER	14,775,122.92	90	13.22	107	66.13	87	248.52	82		
GLOUCESTER	30,004,360.66	68	25.62	34	76.80	71	311.29	54		
GREATER LAWRENCE	4,512,361.29	105	22.35	83	91.41	42	316.39	50		
GREENFIELD	17,323,816.03	86	24.03	64	99.47	26	371.45	30		
HAMPDEN COUNTY	104,814,928.93	20	28.53	15	112.50	9	377.88	27		
HAMPSHIRE COUNTY	65,089,663.13	33	26.40	27	106.85	16	330.12	46		
HAVERHILL	75,422,996.82	28	25.44	39	108.74	14	452.59	8		
HINGHAM	23,060,172.13	82	27.62	23	99.73	25	272.05	70		
HOLYOKE	76,485,136.31	26	25.45	38	88.99	49	285.25	60		
HULL	8,386,580.31	98	19.33	103	72.39	76	200.41	104		
LAWRENCE	56,149,435.17	38	21.69	88	56.26	101	228.64	94		
LEOMINSTER	30,639,441.78	65	24.81	51	85.73	53	352.93	39		
LEXINGTON	44,620,191.62	49	27.49	24	98.68	31	345.01	43		
LOWELL	81,869,442.08	25	25.94	32	83.12	57	246.86	83		
LYNN	96,240,667.85	22	22.81	75	44.76	106	275.00	67		
MALDEN	50,400,161.97	43	28.07	17	97.68	32	246.31	84		
MARBLEHEAD	30,608,733.40	66	25.74	33	129.64	6	279.29	64		
MARLBOROUGH	28,667,439.89	71	25.26	42	105.90	17	387.93	24		
MASS HOUSING FINA	23,877,407.21	77	27.95	19	104.41	19	423.43	16		
MASS PORT AUTH	164,037,539.18	12	23.14	73	93.18	37	392.68	22		
MASS TURNPIKE AUT	119,323,770.05	18	22.14	86	67.39	84	384.40	25		

	December 31 Total Asset V			Percent Change Past Year Past Five Years Since					
Retirement System	<u>Market</u>	Rank	Percent	Rank	<u>Percent</u>	Rank	Percent	Rank	
MASS WATER RESOUR	47,657,121.65	45	46.05	1	N/A	N/A	N/A	N/A	
MAYNARD	7,521,738.08	100	25.12	46	91.12	43	236.61	90	
MEDFORD	61,363,817.65	35	23.28	70	75.12	73	302.85	57	
MELROSE	28,000,682.31	72	27.97	18	65.09	90	234.47	92	
METHUEN	36,727,065.12	58	27.79	21	100.64	24	454.86	7	
MIDDLESEX COUNTY	376,204,011.79	5	22.59	79	103.77	20	367.41	33	
MILFORD	23,423,366.33	80	24.34	60	99.27	27	403.96	19	
MILTON	29,879,309.71	69	22.49	81	77.35	69	278.45	65	
MINUTEMAN REG VO	4,281,343.09	106	24.80	52	101.68	22	692.77	2	
MONTAGUE	6,642,660.71	103	26.90	26	94.61	34	311.03	55	
NATICK	39,648,553.26	54	24.19	62	68.37	81	312.45	52	
NEEDHAM	48,388,991.85	44	21.30	92	64.62	92	380.57	26	
NEW BEDFORD	92,069,448.05	24	21.61	89	100.69	23	243.46	87	
NEWBURYPORT	15,852,830.87	88	22.69	77	84.06	56	364.18	34	
NEWTON	141,462,607.47	15	21.43	91	65.13	89	168.80	106	
NORFOLK COUNTY	224,410,390.59	8	25.21	43	99.14	29	340.11	45	
NORTH ADAMS	16,501,152.37	87	20.87	96	76.96	70	312.29	53	
NORTH ATTLEBORO	21,004,924.01	84	23.95	65	92.92	38	402.78	20	
NORTHAMPTON	22,222,632.92	83	26.19	29	88.56	50	274.79	68	
NORTHBRIDGE	5,548,327.09	104	23.61	67	61.59	95	224.68	96	
NORWOOD	57,424,851.08	36	25.46	37	75.63	72	369.39	31	
PEABODY	55,521,499.34	39	21.25	93	67.84	82	291.77	58	
PITTSFIELD	51,589,690.10	42	23.52	68	72.12	78	234.59	91	
PLYMOUTH	44,756,181.97	48	28.96	14	106.89	15	423.83	14	
PLYMOUTH COUNTY	225,511,330.75	7	24.91	50	110.27	11	423.59	15	
PRIM BOARD	6,890,528,098.11	3	39.79	2	132.86	5	1292.58	1	
QUINCY	143,951,083.64	14	25.43	40	93.62	35	284.91	61	

	December 31		Percent Change						
	Total Asset V	Value	Past Y	ear Past Five Years			Since January 1, 1985		
Retirement System	<u>Market</u>	Rank	Percent	<u>Rank</u>	<u>Percent</u>	Rank	<u>Percent</u>	Rank	
READING	29,531,826.04	70	26.09	30	90.98	44	318.33	49	
REVERE	38,226,327.90	57	21.06	94	51.83	102	243.30	89	
SALEM	45,011,042.15	47	18.04	104	62.07	94	250.07	80	
SAUGUS	18,562,378.58	85	22.61	7 8	91.61	41	248.92	81	
SHREWSBURY	23,162,186.98	81	24.74	55	82.84	59	326.65	47	
SOMERVILLE	74,263,594.82	30	24.98	48	82.74	60	260.69	77	
SOUTHBRIDGE	8,408,816.56	97	22.83	74	85.32	54	216.91	100	
SPRINGFIELD	179,884,661.93	10	20.74	98	62.82	93	254.81	79	
STATE	7,366,059,617.24	2	25.29	41	90.17	47	507.91	5	
STATE TEACHERS	7,552,530,289.44	1	25.58	35	90.30	46	409.46	17	
STONEHAM	24,383,451.87	76	22.54	80	73.10	7 5	277.12	66	
SWAMPSCOTT	14,284,703.49	91	23.49	69	78.49	67	290.01	59	
TAUNTON	56,843,972.85	37	29.53	12	90.74	45	377.53	28	
WAKEFIELD	30,454,487.65	67	24.62	57	79.73	64	267.24	74	
WALTHAM	74,270,171.35	29	20.59	99	48.28	104	261.39	76	
WATERTOWN	39,044,263.45	55	24.61	58	67.79	83	272.40	69	
WEBSTER	7,521,465.11	101	27.64	22	136.78	4	245.32	85	
WELLESLEY	76,219,762.56	27	23.73	66	90.04	48	599.08	3	
WEST SPRINGFIELD	23,702,159.18	79	22.80	76	83.01	58	215.52	101	
WESTFIELD	54,225,454.35	40	25.16	44	103.65	21	448.88	10	
WEYMOUTH	46,848,867.24	46	24.76	53	78.15	68	267.41	73	
WINCHESTER	32,296,480.42	61	24.76	54	79.38	66	350.99	40	
WINTHROP	13,901,069.46	92	28.40	16	92.87	39	245.28	86	
WOBURN	41,063,519.23	52	34.56	3	93.61	36	352.94	38	
WORCESTER	201,330,539.22	9	19.66	102	45.97	105	218.17	99	
WORCESTER COUNTY	169,280,633.63	11	24.05	63	69.16	80	270.89	72	
MASS. RETIREMENT SYSTEMS	22,700,213,836.59		25.06		88.87		396.68		

PART III:

FEES AND TURNOVER

This part of the report focuses attention on the expenses involved in the activity of the boards. The responsibility for day to day management of the portfolio is delegated to professional money managers. PERA requires that such managers meet strict standards. In addition, custody costs and consultant fees are incurred in the normal course of investing by retirement boards. These costs may be paid from investment earnings or paid from appropriations. The return of those systems paying expenses from earnings is reduced by such costs. However, nationwide and in Massachusetts the use of investment earnings is the most common method of paying for these costs. Table Four contains the gross returns of the retirement systems and the net returns of the retirement systems after expenses have been paid from earnings. Following the gross and net returns are the amounts paid for management advice, custodial costs and consultant fees. In evaluating these costs, PERA is seeking to make systems aware of the impact of expenses on real returns. Boards should keep this in mind when negotiating contracts with various vendors.

The same is true in analyzing the turnover in a portfolio. Turnover rates must be judged based on the performance of the portfolio. High turnover rates increase trading costs, consequently, a high level of buying and selling must be justified by performance. As a general principle, such turnover does not enhance performance, however, each manager must be assessed on his or her performance. Table Five contains turnover rates of the stock and bond portfolios of the retirement systems.

Please note:

- The administrative expenses of the PRIT Fund have been categorized as management fees.
- The Investment Committee of the State Treasurer administers the MASTERS Trust for the State Employees' and Teachers' Retirement Systems. The gross return as reported by the Office of the Treasurer was 23.50% and the net return 23.29%, a difference of 21 basis points. These returns differ from those reported for the State Employees' and Teachers' Retirement Systems because they exclude the funds invested by these retirement systems with the PRIT Fund. In addition, the MASTERS Trust pays for administrative and other operating expenses from earnings which is reflected in a lower net return for the State Employees' and Teachers' Retirement Systems than if they had not been paid from earnings.

- Many boards have investments in pooled funds, (e.g. mutual funds, commingled funds, group trusts, real estate funds, limited partnership funds, and venture capital funds). Generally these funds report their valuations and rates of return on a "net" basis after fees have been deducted. Boards are required to obtain fee information from each "net" pooled fund manager and record these fees in their monthly accounting records. Some boards have not fulfilled this requirement. This will result in an understatement of management fees as reported in Table Four and a slight understatement of the gross rate of return.
- The administrative expenses and other operating expenses of the MASTERS Trust have been categorized as management fees for the State Employees' and Teachers' Retirement Systems.
- Management fees for those retirement systems which retain BayBank as both their primary manager and custodian include custody fees.
- Information regarding expenses was derived from the records of the retirement systems, pooled fund statements, the PRIT Fund, and the Office of the Treasurer.
- With respect to the boards investing in pooled funds, the turnover data reflects the
 purchase and redemption of units/shares and does not reflect the buying and
 selling of stocks and bonds within these funds.

Statewide in 1995, the gross return was 23.49% and the net return 23.10%, a difference of 39 basis points. Statewide, \$62,219,667 was paid in management fees, \$3,716,798 was paid in custody fees, and \$2,727,359 was paid in consulting fees.

Annual Report of the Massachusetts Contributory Retirement Systems for the year ending December 31, 1995

	Gross	Gross and Net Performance			Management, Custodian Bank and Consultant Fees				
Retirement System	C	N T 4	Basis Point	Management	Custodian Bank	Consultant			
Retrement System	<u>Gross</u>	Net	Difference	<u>Fees</u>	<u>Fees</u>	Fees	Market Value		
ADAMS	23.62	23.27	35	27,584.00	9,896.73	0.00	0.35		
AMESBURY	20.42	19.79	63	49,852.81	15,041.61	12,520.06	0.50		
ANDOVER	22.33	21.87	46	105,732.78	13,282.00	0.00	0.38		
ARLINGTON	27.61	27.41	20	60,585.87	15,428.07	27,258.37	0.14		
ATHOL	16.29	15.69	60	33,560.43	6,631.83	0.00	0.58		
ATTLEBORO	22.79	22.55	24	50,109.69	0.00	0.00	0.18		
BARNSTABLE COUNTY	23.56	23.04	52	587,388.86	20,109.00	48,150.00	0.41		
BELMONT	26.93	26.29	64	151,978.02	26,265.05	12,050.45	0.61		
BERKSHIRE COUNTY	24.40	24.02	38	102,443.09	21,836.41	119.34	0.29		
BEVERLY	25.17	24.40	77	144,018.54	30,911.12	21,000.00	0.56		
BLUE HILLS REG VO	25.90	25.13	77	22,170.66	12,467.91	0.00	0.85		
BOSTON	23.14	22.79	35	4,467,217.87	435,033.95	43,150.00	0.28		
BRAINTREE	20.45	20.00	45	184,857.30	31,850.13	24,750.00	0.45		
BRISTOL COUNTY	25.28	24.98	30	284,817.94	0.00	0.00	0.23		
BROCKTON	23.05	22.31	74	574,271.72	60,263.76	40,000.00	0.66		
BROOKLINE	26.35	25.85	50	289,669.13	43,418.49	22,025.81	0.37		
CAMBRIDGE	25.71	25.20	51	885,292.71	0.00	0.00	0.38		
CHELSEA	24.25	23.88	37	71,621.69	0.00	0.00	0.27		
CHICOPEE	23.88	23.38	50	234,228.08	31,989.60	6,000.00	0.42		
CLINTON	16.51	15.99	52	31,996.76	0.00	0.00	0.39		
CONCORD	22.33	21.90	43	107,186.23	12,498.99	426.35	0.36		
DANVERS	20.86	20.86	0	98,277.72	10,000.00	0.00	0.26		
DEDHAM	24.10	23.59	51	86,739.95	2,160.46	2,811.21	0.36		
DUKES COUNTY	21.49	21.34	15	28,888.37	0.00	0.00	0.21		
EASTHAMPTON	19.23	18.71	52	50,000.00	0.00	0.00	0.42		
ESSEX COUNTY	23.17	22.63	54	392,058.77	46,566.12	29,558.05	0.44		
EVERETT	25.64	25.33	31	88,823.70	0.00	0.00	0.23		

	Gross	and Net Per	formance					
			Basis Point	Management				
Retirement System	<u>Gross</u>	<u>Net</u>	<u>Difference</u>	<u>Fees</u>	<u>Fees</u>	<u>Fees</u>	<u>Market Value</u>	
FAIRHAVEN	23.53	23.03	50	33,862.24	843.42	1,097.46	0.37	
FALL RIVER	23.62	23.39	23	190,380.48	19,676.77	0.00	0.18	
FALMOUTH	30.87	30.49	38	83,639.40	0.00	0.00	0.27	
FITCHBURG	21.21	21.21	0	62,615.00	0.00	0.00	0.15	
FRAMINGHAM	25.55	25.08	47	245,859.94	1,765.45	2,297.23	0.34	
FRANKLIN COUNTY	22.46	22.46	0	74,105.00	4,000.00	0.00	0.33	
GARDNER	24.07	23.53	54	53,801.38	1,340.05	1,743.69	0.39	
GLOUCESTER	25.68	25.13	55	99,173.00	21,726.58	25,000.00	0.49	
GREATER LAWRENCE	21.00	21.00	0	29,027.92	0.00	0.00	0.64	
GREENFIELD	20.03	19.92	11	77,676.13	10,714.79	13,962.16	0.59	
HAMPDEN COUNTY	23.67	23.22	45	333,905.10	19,375.00	7,500.00	0.34	
HAMPSHIRE COUNTY	21.96	21.44	52	232,899.27	24,756.57	0.00	0.40	
HAVERHILL	23.61	22.70	91	415,124.55	45,024.68	56,250.00	0.68	
HINGHAM	23.72	23.22	50	79,248.53	1,973.87	2,568.42	0.36	
HOLYOKE	25.08	24.69	39	219,825.91	19,946.86	22,173.63	0.34	
HULL	18.07	17.22	85	51,980.63	0.00	0.00	0.62	
LAWRENCE	23.59	23.09	50	202,481.00	14,499.76	0.00	0.39	
LEOMINSTER	22.96	22.96	0	38,585.00	16,535.00	0.00	0.18	
LEXINGTON	26.47	26.27	20	54,149.53	13,605.71	0.00	0.15	
LOWELL	23.29	22.59	70	338,254.59	41,242.23	51,513.77	0.53	
LYNN	24.28	23.93	35	304,243.08	21,400.86	34,639.37	0.37	
MALDEN	22.74	22.42	32	122,956.00	10,178.26	0.00	0.26	
MARBLEHEAD	24.01	23.49	52	105,606.96	2,630.39	3,422.69	0.36	
MARLBOROUGH	21.00	20.41	59	120,919.09	19,691.10	12,000.00	0.53	
MASS HOUSING FINA	23.48	22.98	50	89,813.69	17,733.46	0.00	0.45	
MASS PORT AUTH	20.87	20.73	14	325,565.27	53,334.71	15,017.86	0.24	
MASS TURNPIKE AUT	21.59	21.24	35	230,266.58	54,124.47	42,750.00	0.27	

	Gross	Gross and Net Performance			Management, Custodian Bank and Consultant Fees			
		В		Management	Custodian Bank	Consultant	As a % of	
Retirement System	<u>Gross</u>	<u>Net</u>	Difference	<u>Fees</u>	<u>Fees</u>	<u>Fees</u>	<u>Market Value</u>	
MASS WATER RESOUR	20.01	19.39	62	207,996.53	12,426.88	72.42	0.46	
MAYNARD	23.27	22.80	47	26,005.32	0.00	0.00	0.35	
MEDFORD	22.87	22.23	64	214,375.49	51,596.60	39,465.96	0.50	
MELROSE	20.27	19.96	31	62,499.74	18,229.64	0.00	0.29	
METHUEN	24.86	24.86	0	95,961.00	19,894.33	0.00	0.32	
MIDDLESEX COUNTY	22.16	21.31	85	2,238,199.94	160,880.97	116,680.00	0.67	
MILFORD	21.71	21.71	0	47,688.21	0.00	0.00	0.20	
MILTON	24.07	23.57	50	102,153.90	2,544.38	3,310.78	0.36	
MINUTEMAN REG VO	23.75	23.26	49	14,443.49	359.75	468.11	0.36	
MONTAGUE	23.66	23.16	50	21,763.73	542.08	705.36	0.35	
NATICK	26 .51	26.18	33	65,162.93	20,744.42	10,416.70	0.24	
NEEDHAM	23.93	23.43	50	169,968.58	4,233.46	5,508.63	0.37	
NEW BEDFORD	23.17	22.56	61	406,863.50	836.21	22,338.09	0.47	
NEWBURYPORT	20.91	20.50	41	38,731.07	10,421.59	0.00	0.31	
NEWTON	24.71	24.09	62	561,095.09	60,875.10	40,000.00	0.47	
NORFOLK COUNTY	22.43	21.97	46	644,652.08	45,101.67	82,615.16	0.34	
NORTH ADAMS	23.52	22.88	64	67,406.00	14,935.99	0.00	0.50	
NORTH ATTLEBORO	21.13	20.87	26	41,284.33	12,500.38	13,646.40	0.32	
NORTHAMPTON	23.66	23.18	48	65,214.00	14,826.64	0.00	0.36	
NORTHBRIDGE	23.90	23.38	52	19,194.34	478.08	622.08	0.37	
NORWOOD	25.01	24.24	77	290,434.72	15,619.01	24,250.00	0.58	
PEABODY	25.65	25.18	47	167,705.00	28,401.78	0.00	0.35	
PITTSFIELD	23.74	23.24	50	174,153.00	15,000.00	0.00	0.37	
PLYMOUTH	25.38	24.65	73	191,453.50	46,569.08	28,915.00	0.60	
PLYMOUTH COUNTY	23.21	23.05	16	263,791.84	104,038.53	75,782.87	0.20	
PRIM BOARD	24.13	23.58	55	25,003,253.00	574,986.00	748,178.00	0.38	
QUINCY	23.41	23.06	35	378,767.72	46,522.56	193.26	0.30	

	Gross a	nd Net Per	formance	Manageme	and Consult	nsultant Fees	
			Basis Point	Management	Consultant	As a $\%$ of	
Retirement System	Gross	Net	Difference	Fees	<u>Fees</u>	<u>Fees</u>	Market Value
READING	24.10	23.59	51	99,575.14	2,480.15	3,227.20	0.36
REVERE	23.22	22.74	48	127,517.11	3,176.11	4,132.79	0.35
SALEM	23.11	22.45	66	193,671.08	36,302.19	0.00	0.51
SAUGUS	23.79	23.30	49	64,998.22	1,618.93	2,106.57	0.37
SHREWSBURY	24.55	23.64	91	108,194.68	36,676.83	16,634.52	0.70
SOMERVILLE	22.82	22.38	44	215,144.56	44,639.44	0.00	0.35
SOUTHBRIDGE	23.73	23.25	48	35,134.99	15,881.71	0.00	0.61
SPRINGFIELD	22.95	22.58	37	290,896.86	190,460.99	27,500.00	0.28
STATE	23.86	23.49	37	18,856,877.22	564,652.65	684,303.49	0.27
STATE TEACHERS	23.87	23.51	36	18,663,358.03	577,131.47	694,103.31	0.26
STONEHAM	21.80	21.20	60	116,736.37	16,902.42	13,136.07	0.60
SWAMPSCOTT	22.05	21.59	46	40,860.00	10,085.75	0.00	0.36
TAUNTON	21.56	20.88	68	267,823.89	9,137.94	24,624.36	0.53
WAKEFIELD	23.93	23.41	52	104,542.98	2,603.88	3,388.21	0.36
WALTHAM	24.88	24.64	24	136,998.17	0.00	0.00	0.18
WATERTOWN	23.76	23.29	47	119,800.83	17,197.10	20,625.00	0.40
WEBSTER	27.15	26.61	54	29,834.76	5,500.00	0.00	0.47
WELLESLEY	27.74	27.17	57	248,497.47	42,535.42	42,860.00	0.44
WEST SPRINGFIELD	21.02	20.84	18	32,029.35	13,035.00	0.00	0.19
WESTFIELD	23.07	22.45	62	255,825.00	41,188.38	0.00	0.55
WEYMOUTH	24.26	23.76	50	160,896.20	4,007.49	5,214.60	0.36
WINCHESTER	24.78	24.37	41	74,235.68	25,635.95	0.00	0.31
WINTHROP	27.58	27.07	51	49,489.14	9,066.74	0.00	0.42
WOBURN	25.41	25.41	0	0.00	0.00	0.00	0.00
WORCESTER	21.87	21.24	63	944,979.71	0.00	86,500.00	0.51
WORCESTER COUNTY	23.31	22.48	83	977,446.55	57,531.51	52,256.17	0.64

Annual Report of the Massachusetts Contributory Retirement Systems for the year ending December 31, 1995

Table Five			Portfolio	Turnover				Page One
	****	Equity T	urnover	******************	***************************************	Fixed Incor	ne Turnover	
Retirement System	Total	% of Avg. Market Valu	Total	% of Avg. Market Valu	Total	% of Beg. Market Valu	Total	% of Beg. Market Value
ADAMS	1,833,597.50	52.26	1,954,182.14	55.69	1,387,640.00	32.61	1,264,054.50	6 29.71
AMESBURY	2,218,769.84	4 43.52	995,881.55	19.54	21,254,096.18	3 262.08	21,655,226.7	1 267.02
ANDOVER	21,223,126.74	175.40	14,554,346.76	120.29	18,274,288.52	134.00	21,368,043.90	156.69
ARLINGTON	0.00	0.00	0.00	0.00	7,962,234.80	32.38	9,216,916.6	5 37.49
ATHOL	2,012,559.90	116.86	1,543,180.20	89.60	830,732.83	20.56	1,383,377.59	9 34.23
ATTLEBORO	5,764,930.87	7 60.13	5,905,589.06	61.60	17,525,860.15	146.23	16,288,795.13	3 135.91
BARNSTABLE COUNTY	32,979,971.04	47.19	26,047,977.40	37.27	100,637,520.27	193.28	95,716,681.42	2 183.83
BELMONT	3,051,667.27		3,836,547.89		10,080,543.46	107.89	10,706,202.58	3 114.58
BERKSHIRE COUNTY	14,953,787.95	5 103.03	14,018,075.88	96.59	16,133,589.91	. 88.45	13,072,429.79	71.66
BEVERLY	7,637,027.47		8,105,075.99		4,627,139.68		4,185,269.66	3 47.94
BLUE HILLS REG VO	299,619.93	3 19.27	304,258.12	19.57	1,217,735.23	70.60	1,053,599.22	2 61.08
BOSTON	454,324,865.02	2 42.88	377,836,003.75	35.66	1,048,477,972.30	301.47	994,090,905.25	285.83
BRAINTREE	7,111,919.67	7 52.31	7,712,086.04	56.73	45,578,245.45	185.90	38,727,525.51	157.96
BRISTOL COUNTY	78,173,150.87	7 160.33	67,875,837.68	139.21	84,980,473.38	153.02	88,908,316.15	160.09
BROCKTON	64,466,044.53	3 125.27	63,517,402.23	123.42	27,314,976.13	85.55	25,872,883.28	
BROOKLINE	28,902,841.08	78.02	28,901,601.49	78.02	38,486,898.34	104.47	31,622,416.68	85.83
CAMBRIDGE	98,167,723.69	80.83	105,439,366.64	86.81	93,421,985.36	176.92	69,255,449.09	
CHELSEA	7,379,534.85	61.00	7,768,712.68	64.22	13,594,386.98	140.76	13,070,238.87	135.33
CHICOPEE	12,022,231.15	5 43.46	10,322,091.80	37.31	22,207,607.24	99.11	20,339,133.55	90.77
CLINTON	849,480.06	5 11.30	721,669.43	9.60	0.00	0.00	0.00	0.00
CONCORD	735,696.30	5.71	0.00		3,467,283.67	23.90	3,124,276.56	21.53
DANVERS	6,106,366.15	5 43.60	1,395,344.81	9.96	44,946,427.46	200.81	46,480,326.16	207.66
DEDHAM	1,155,000.00	5.17	120,000.00	0.54	0.00	0.00	0.00	0.00
DUKES COUNTY	3,738,504.57	7 90.90	3,338,885.12	81.19	8,819,962.93	133.55	7,951,925.11	120.40
EASTHAMPTON	1,435,023.50	58.17	494,953.70	20.06	499,031.25	6.54	550,512.34	7.21
ESSEX COUNTY	55,014,091.19	114.38	54,408,508.70	113.13	39,933,356.68	125.35	35,563,947.74	111.64
EVERETT	12,068,569.90		13,061,026.08	74.51	23,583,490.04	175.61	22,164,243.64	165.05

	Equity Turnover			Fixed Income Turnover				
	Total % of Avg. Total % of Avg.			Total % of Beg. Total % of Beg.				
Retirement System	Purchases	Market Value	<u>Sales</u>	Market Value	<u>Purchases</u>	Market Value	<u>Sales</u>	Market Value
FAIRHAVEN	725,679.8	4 8.51	990,000.00	11.61	0.00	0.00	0.00	0.00
FALL RIVER	56,345,086.74		52,030,082.46		85,494,906.68		84,336,277.3	
FALMOUTH	13,197,028.10		17,361,990.20		8,614,899.58		5,632,276.3	
FITCHBURG	4,678,340.78		4,423,755.68		5,446,147.80		2,511,037.1	
FRAMINGHAM	8,282,295.00		5,398,579.04		0.00		877.7	
FRANKLIN COUNTY	8,492,771.6		8,022,895.81		9,310,718.46		8,136,779.78	
GARDNER	921,512.30	7.00	2,135,641.18	16.22	0.00	0.00	0.00	0.00
GLOUCESTER	17,441,929.3	5 121.29	14,838,027.45	103.18	11,130,179.10	95.67	12,014,372.58	3 103.27
GREATER LAWRENCE	1,429,057.92	2 81.44	1,178,671.64	67.17	476,491.28	3 26.97	278,789.44	15.78
GREENFIELD	4,814,117.14	4 77.96	4,340,085.54	70.28	10,228,250.50	147.70	8,707,860.00	3 125.74
HAMPDEN COUNTY	44,767,205.02	2 95.88	39,227,145.91	84.02	31,460,898.81	85. 56	27,232,176.13	1 74.06
HAMPSHIRE COUNTY	11,741,147.5	5 36.13	11,661,240.19	35.88	15,965,789.79	88.59	14,375,851.17	79.77
HAVERHILL	50,822,677.98	3 107.54	48,401,725.73	102.42	26,085,266.18	3 156.44	26,002,537.44	155.94
HINGHAM	650,000.00		160,000.00	0.79	0.00	0.00	0.00	0.00
HOLYOKE	31,516,532.88	96.32	28,014,112.23	85.62	27,303,298.89	90.70	25,616,307.08	85.09
HULL	3,467,754.20	103.81	255,018.83	7.63	2,243,379.97	7 49.27	5,286,142.14	116.09
LAWRENCE	45,872,052.9		46,090,347.20	173.69	85,182,855.13	398.43	83,405,992.22	390.12
LEOMINSTER	6,949,253.70	68.12	5,776,747.84	56.62	3,421,681.28	5 26.35	1,364,034.63	3 10.50
LEXINGTON	1,360,350.00	5.87	1,360,350.00	5.87	8,587,042.78	59.85	7,113,651.13	3 49.58
LOWELL	51,810,535.83	3 98.36	44,553,970.24	84.59	9,318,673.9	7 70.57	7,927,529.12	2 60.04
LYNN	50,923,341.9	7 114.93	57,781,248.22	130.41	29,355,498.38	90.88	20,126,143.84	4 62.31
MALDEN	16,873,708.3	5 73.77	17,912,908.30	78.31	14,791,497.5	7 89.40	9,611,092.2	2 58.09
MARBLEHEAD	1,923,252.00	7.01	1,359,000.00	4.95	0.00	0.00	0.00	0.00
MARLBOROUGH	11,724,027.9	5 106.49	9,720,041.09	88.29	13,690,787.28	3 104.96	14,535,857.86	6 111.44
MASS HOUSING FINA	7,213,508.98	94.27	6,201,610.72	81.04	11,088,603.4	3 101.17	9,748,082.79	88.94
MASS PORT AUTH	15,858,524.6		15,527,039.55		35,883,775.2		24,486,912.63	38.64
MASS TURNPIKE AUT	32,559,595.19	9 154.24	16,470,761.04	78.02	32,405,248.82	2 42.17	46,696,416.92	2 60.76

90.50

335,213,023.22

1.206.26

307,518,809.61

1.106.61

61,723,482.94

QUINCY

62,812,035.33

92.10

	****************	Equity Tu	ırnover		Fixed Income Turnover					
	Total	% of Avg.	Total	% of Avg.	Total	% of Beg.	Total	% of Beg.		
Retirement System	Purchases	Market Value	Sales	Market Value		Market Value		Market Value		
READING	2,156,843.0	0 8.30	1,475,103.87	5.68	0.00	0.00	0.0	0.00		
REVERE	706,022.3		0.00		0.00		0.0			
SALEM	12,714,106.84		11,885,337.92		19,232,074.93		19,147,064.12			
SAUGUS	2,275,854.2		2,400,000.00		0.00		0.00			
SHREWSBURY	9,446,350.24		7,550,798.64		4,328,004.32		5,230,347.3			
SOMERVILLE	22,966,000.98		23,127,715.44		23,019,030.50		28,743,093.3			
SOUTHBRIDGE	5,378,704.20	6 161.87	4,504,869.46	135.57	3,152,060.17	124.63	2,289,355.83	3 90.52		
SPRINGFIELD	40,867,307.42		49,120,640.35		84,157,730.22		81,102,657.6			
STATE	634,027,826.49		326,725,160.67		0.00		0.00			
STATE TEACHERS	662,008,932.28		367,733,725.55		0.00		0.00			
STONEHAM	6,012,264.68		5,248,537.62		20,258,396.47		20,311,515.56			
SWAMPSCOTT	10,493,832.42		10,763,159.69		9,458,526.80		8,275,122.59			
TAUNTON	18,145,597.37	7 57.08	14,916,685.40	46.92	18,499,066.54	126.86	15,086,299.17	7 103.45		
WAKEFIELD	2,507,914.40	9.15	2,260,000.00		0.00		0.00			
WALTHAM	28,323,488.99		30,982,745.11		49,564,013.33		46,206,646.86			
WATERTOWN	8,080,182.05	5 46.57	7,971,634.59		16,815,873.76		15,606,790.09			
WEBSTER	3,779,289.17	7 113.26	3,598,189.92		2,003,120.20		1,558,281.17			
WELLESLEY	29,796,940.65	63.85	28,926,072.48		24,382,124.85		24,073,016.91			
WEST SPRINGFIELD	10,830,893.90	139.46	9,699,569.00	124.89	9,117,942.85	79.68	10,962,082.63	95.79		
WESTFIELD	20,987,860.15	86.17	24,649,564.91		21,298,154.68		14,524,755.78			
WEYMOUTH	5,900,000.00	14.24	5,400,000.00		0.00		0.00			
WINCHESTER	13,989,229.34	102.51	10,564,965.41		11,268,059.23		11,213,587.11			
WINTHROP	981,154.80		1,332,910.73		2,341,133.37		976,650.43			
WOBURN	11,413,452.66		7,648,147.74		9,997,241.05		9,430,117.77			
WORCESTER	43,105,068.80	36.97	46,356,742.43	39.76	38,744,365.96	62.73	42,547,741.27	7 68.88		
WORCESTER COUNTY	61,534,541.83	72.33	46,912,764.32		48,221,437.05		49,840,847.92			

PART IV:

INVESTMENT MANAGERS, CONSULTANTS, AND CUSTODIAN BANKS

Chapter 32 and traditional trust law establishes a fiduciary duty for Board members and other parties involved in the management of our retirement systems. In the area of investment activity and in particular vendor selection, that duty sets certain standards which these individuals must meet. One of the most obvious of these standards relates to decision makers having some interest in the success or failure of a vendor seeking to do business with the Board. Fiduciaries must be disinterested and must act only with the members and beneficiaries in mind.

In many respects compliance with fiduciary duty is simply a matter of common sense. In the context of vendor selection it is also important that any individual or firm assisting the Board avoid conflict of interest. Furthermore after a vendor is selected it must act only in the interest of the Board. For all these reasons common sense dictates that parties involved in or potentially involved in providing services to Boards disclose any circumstances which might give rise to such conflicts. Clearly a request for such a disclosure by the Board is the minimum required of a fiduciary.

The information that follows lists those firms which provide management, consulting and custodian services to Boards. This information was taken from records on file at PERA and has been confirmed by the individual retirement boards.

The selection and evaluation of competing firms has had an increasing impact on the investment performance of the retirement systems. This is particularly true as Boards now rely on consultants to assist in the development of asset allocation strategy as well as managers to carry out that strategy. Thus the duty to act prudently in the selection and monitoring of vendors becomes a determining factor in the results achieved.

The following is a list of each retirement system and the investment manager(s) with the corresponding waiver approval date/date invested in PRIT, consultant, and custodian retained by each retirement system as of December 31, 1995.

WAIVER/PRIT DATE ADAMS RETIREMENT SYSTEM 5-25-89 **Taylor Investments** Custodian: **BayBank** AMESBURY RETIREMENT SYSTEM 4-17-85 Boston Financial Management, Inc. 9-8-93 Bank of Ireland Asset Management Int'l Equity Trust Consultant: The Hannah Group Custodian: State Street ANDOVER RETIREMENT SYSTEM 12-31-93 Harbor Capital Management State Street Custodian: ARLINGTON RETIREMENT SYSTEM 3-5-85 Fleet Investment Advisors 2-6-92 State Street Bank and Trust 2-15-95 State Street Global Advisors International Index Fund 2-15-95 Flagship S&P 500 Index Fund Wilshire Associates Consultant: State Street Custodian: ATHOL RETIREMENT SYSTEM 6-25-85 Fleet Investment Advisors 12-22-88 PaineWebber Equity III Fund 8-8-89 PaineWebber Independent Living Mortgage Fund Fleet Bank Custodian: ATTLEBORO RETIREMENT SYSTEM 4-1-85 BayBanks Investment Management, Inc. 12-22-88 PaineWebber Equity II Fund 5-4-95 BayBank Small Cap Fund 12-21-95

World Asset Management S&P 500 Fund

BayBank

Custodian:

BARNSTABLE COUNTY RETIREMENT SYSTEM

Aeltus - Real Estate U.S. Trust Company Putnam Advisory Company Thompson, Siegel & Walmsley 7-27-89 4-24-92 9-30-93 9-30-93

Consultant: William M. Mercer Custodian: Bank of Boston

BELMONT RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund Oppenheimer Capital Putnam World Income Trust Putnam International Trust 5-24-89 6-30-89 11-19-92 11-19-92

Consultant: New England Pension Consultants
Custodian: BayBank

BERKSHIRE COUNTY RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund Freedom Capital Management Corporation 2-23-87 7-7-93

Custodian: Bank of Boston

BEVERLY RETIREMENT SYSTEM

Aeltus - Real Estate
PanAgora Investment Series Asset Allocation
Munder Capital Management
Income Research & Management
Putnam World Income Trust
Bank of Ireland Asset Management Int'l Equity Trust

8-31-89 6-24-92 10-8-92 1-21-93 7-21-94

7-21-94

Consultant: New England Pension Consultants
Custodian: State Street

BLUE HILLS REG. SCHOOL RETIREMENT SYSTEM

David L. Babson

4-12-85

Custodian: Bank of Boston

BOSTON RETIREMENT SYSTEM

Wellington Management Company Liberty Asset Management PanAgora Asset Management 2-21-85 11-14-86 11-14-86

BOS	TON	RETIRI	EMENT	SYSTEM	(continued)

BUSION RETIREMENT SYSTEM (continued)	
Avatar Associates	11-14-86
Bear Stearns Asset Management	2-4-87
Oechsle International Advisors	6-30-87
Mercury Asset Management International Ltd.	7-15-87
Acacia/PCA Realty Advisors Ruggles Center I	8-11-87
LaSalle Advisors	8-11-87
INVESCO Realty Advisors	8-11-87
Frank Russell Trust Company	8-11-87
Public Storage Institutional Fund II	8-11-87
Copley Partners I & II	8-11-87
State Street Bank and Trust	12-12-88
Massachusetts Financial Services	9-7-89
Richmond Capital Management	9-7-89
Back Bay Advisors	9-7-89
Metric Institutional Realty Advisors	9-7-89
Nicholas/Applegate	9-14-89
Heitman Advisory Corporation	11-17-89
MIG Realty Advisors	12-19-89
Shurgard Institutional Fund L.P. II	5-11-90
T. H. Lee Equity Partners, L.P.	5-11-90
BEA Associates, Inc.	4-25-91
Schroder Real Estate Value Enhancement Fund B L.P.	5-5-92
Acacia/PCA Realty Advisors Ruggles Center I	7-16-92
New England Growth Fund I, L.P.	7-16-92
RhumbLine Group Trust	5-25-93
Zevenbergen Capital	5-25-93
Target Investors, Inc.	9-2-93
Thorsell Parker Partners	9-2-93
Chancellor Capital Management	1-27-94
Templeton Investment Counsel	11-17-94
Strategic Fixed Income, L.P.	8-10-95

Consultant: Callan Associates, Inc.

Custodian: State Street

BRAINTREE RETIREMENT SYSTEM

1838 Investment Advisors Boston Company International Fund Metric Apartment Co-Investment Trust Fund (MAC Trust)

Consultant: The Hannah Group

Custodian: **State Street**

9-9-86 12-28-95 12-28-95

BRISTOL COUNTY RETIREMENT SYSTEM

Palmer Organization III L.P.
BayBanks Investment Management, Inc.
Aeltus - Real Estate
BayBanks Investment Management, Inc.
Charles River Partnership VII
Metric Apartment Co-Investment Trust Fund (MAC Trust)

5-20-87 3-16-88 2-23-89 7-5-89 9-29-94 9-29-94 7-27-95

Custodian: BayBank

BROCKTON RETIREMENT SYSTEM

Freedom Capital Management Corporation

Loomis Sayles & Company 6-7-89 Freedom Capital Management Corporation 6-7-89 L&B Real Estate Counsel IV 5-11-90 Bank of Ireland Asset Management Int'l Equity Trust 6-15-90 **Boston Capital Ventures II** 11-26-91 Alliance Capital Management 3-24-93 **Boston Capital Ventures III** 12-15-94 Delaware International Global Fixed Income Portfolio 1-12-95 Pioneer Ventures, L.P. II 3-1-95 Metric Apartment Co-Investment Trust Fund (MAC Trust) 12-7-95

Consultant: The Hannah Group
Custodian: Mellon Trust

BROOKLINE RETIREMENT SYSTEM

State Street Research & Management Company
State Street Research & Management Company - International
Pension Reserves Investment Trust (PRIT) Fund
Loomis Sayles & Company

6-26-86 8-24-89 9-30-89 1-28-93

Consultant: Wyatt Asset Services, Inc. Custodian: State Street

CAMBRIDGE RETIREMENT SYSTEM

Freedom Capital Management Corporation

Aeltus - Congregate Care Fund

Wellington Management Company

BIAM Group Trust - SAF International Equity Sub-Trust

Fleet Investment Advisors

Charles River Partnership VII

11-9-90

11-9-90

11-9-90

11-9-90

11-9-90

11-9-90

CAMBRIDGE RETIREMENT SYSTEM (continued)

Pioneer Ventures, L.P. II Income Research & Management 1-30-95 6-21-95

Consultant: Sega Custodian: State

Segal Advisors State Street

CHELSEA RETIREMENT SYSTEM

BayBanks Investment Management, Inc. EuroPacific Growth Fund BayBank Small Cap Fund 8-24-89 7-21-94 4-13-95

Custodian:

BayBank

CHICOPEE RETIREMENT SYSTEM

Freedom Capital Management Corporation
Leonard Management Group
State Street Research & Management Company
Met Life/State Street Research Capital Appreciation #43
MassMutual Participation Investors
Metric Institutional Apartment Fund II
Met Life/State Street Research Small Cap Fund #96
Met Life/State Street Research Growth Equity #40
Scottish Equitable Invest. Mgmt. Ltd Pooled Trust-Int'l Equity Inv Fund

6-26-86 3-21-88 11-24-89 11-27-91 11-27-91 2-18-92 11-2-95 11-2-95 12-14-95

Consultant:

Segal Advisors

Custodian:

BayBank

CLINTON RETIREMENT SYSTEM

Aeltus Investment Management, Inc.
Aeltus - Real Estate
Aeltus - International Equity
Alliance Capital Management
Pimco Low Duration Fund
Pimco Total Return Fund
Newberger & Berman Guardian Fund
Janus Fund
Mutual Series Beacon Fund
20th Century Select Fund
20th Century Ultra Fund
Templeton Foreign Fund
Scudder International Bond Fund
Cash Management Trust

Fundamental Investors Fund

2-14-91 2-14-91 2-14-91 6-30-94 7-7-94 7-7-94 7-7-94 7-21-94 7-21-94 7-21-94 7-21-94 7-28-94 10-19-95 10-19-95

CLINTON RETIREMENT SYSTEM (continued)

Investment Company of America Fund Washington Mutual Investors Fund

10-19-95 10-19-95

Consultant:

Trust Advisory Group

CONCORD RETIREMENT SYSTEM

Fleet Investment Advisors
Frank Russell Equity I Fund
Pension Reserves Investment Trust (PRIT) Fund
Frank Russell Tactical Asset Fund
Galaxy Fund

5-21-86 5-21-86 6-1-90 11-22-95 12-28-95

Custodian:

Fleet Bank

DANVERS RETIREMENT SYSTEM

Boston Financial Management, Inc.

4-3-85

Custodian:

State Street

DEDHAM RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund

6-30-88

DUKES COUNTY RETIREMENT SYSTEM

Aeltus - Real Estate
BayBanks Investment Management, Inc.

3-7-91 5-12-92

Custodian:

BayBank

EASTHAMPTON RETIREMENT SYSTEM

Wright Investors' Service

10-13-93

Custodian:

Investors Bank & Trust/Greenfield Savings Bank

ESSEX COUNTY RETIREMENT SYSTEM

Freedom Capital Management Corporation
State Street Research & Management Company
Bank of Ireland Asset Management Int'l Equity Trust
David L. Babson
L&B 90's Investment Program
Met Life Tower Fund

5-6-85 1-4-90 2-10-94 3-10-94 10-19-95 10-19-95

Consultant:

Segal Advisors

Custodian:

2-15-85

EVERETT RETIREMENT SYSTEM

BayBanks Investment Management, Inc. New England Growth Fund I, L.P. BayBank Small Cap Fund New England Growth Fund II, L.P.

6-30-93 4-26-95 11-9-95

Custodian:

BayBank

FAIRHAVEN RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund

7-1-86

FALL RIVER RETIREMENT SYSTEM

BayBanks Investment Management, Inc. BayBank Small Cap Fund Freedom Capital Management Corporation 8-27-85 4-26-95 4-26-95

Custodian:

BayBank

FALMOUTH RETIREMENT SYSTEM

Bear Stearns Asset Management

10-19-95

Consultant:

The Hannah Group

Custodian:

State Street

FITCHBURG RETIREMENT SYSTEM

Safety Fund National Bank

4-19-85

Custodian:

Safety Fund National Bank

FRAMINGHAM RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund State Street Growth Equity Fund #40 Met Life Broad Market Fund #41 GFM International Investment Bond Fund #64 Met Life/State Street Research Small Cap Fd #96 Allmerica Asset Management Core Fixed Income Fund 11-28-86 10-17-90 10-17-90 10-9-91 12-28-95 12-28-95

FRANKLIN COUNTY RETIREMENT SYSTEM

Freedom Capital Management Corporation Metropolitan Life Market Plus #109 3-31-88 4-24-92

Custodian:

State Street

GARDNER RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund

12-1-86

GLOUCESTER RETIREMENT SYSTEM

Freedom Capital Management Corporation Miller Anderson & Sherrerd

4-19-85 7-27-95

Consultant:

New England Pension Consultants

Custodian:

BayBank

GREATER LAWRENCE SAN. DIST. RETIREMENT SYSTEM

Beacon Fiduciary Advisors, Inc.

5-23-90

Custodian:

Brown Brothers Harriman

GREENFIELD RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund PaineWebber Equity III Fund Harbor Capital Management Babson-Stewart Ivory International Fund L.P. III 2-25-87

4-17-89

3-14-91

9-30-93

Consultant:

The Hannah Group

Custodian:

State Street

HAMPDEN COUNTY RETIREMENT SYSTEM

Freedom Capital Management Corporation Wellington Management Company Wellington International Stock Portfolio Wellington Trust Mid-Cap Portfolio 10-13-88

5-8-91

9-29-94

1-30-95

Consultant:

Prudential Securities, Inc.

Custodian:

BayBank

HAMPSHIRE COUNTY RETIREMENT SYSTEM

Bank of Ireland Asset Management Int'l Equity Trust
L&B Real Estate Counsel Fund IV
Shurgard Institutional Fund L.P. II
RhumbLine Group Trust
Wellington Management Company Structured Mid-Cap Portfolio
Sentinel Realty Partners II
Freedom Capital Management Corporation
Van Kampen Merritt Management, Inc.

12-12-90 1-29-91 1-29-92 2-25-92 11-12-92 6-3-93

12-22-94

12-22-94

Custodian:

State Street

1-24-86

HAVERHILL RETIREMENT SYSTEM			
Boston Company	7-8-85		
L&B Real Estate Counsel Fund III	. 10-27-88		
New England Growth Fund I, L.P.	1-21-92		
Babson-Stewart Ivory International Fund L.P. III	1-21-92		
Commonwealth BioVentures Fund IV	1-21-92		
L&B Real Estate Counsel Fund IV	1-21-92		
Scudder, Stevens & Clark	6-10-93		
Metric Apartment Co-Investment Trust Fund (MAC Trust)	7-29-93		
Bank of Ireland Asset Management Int'l Equity Trust	8-5-93		
North Bridge Venture Partners	3-24-94		
RII Timberland III L.L.C.	6-21-95		
Hutchens Investment Management	8-3-95		
Alliance Capital Management	10-5-95		
IDS Advisory Group	12-21-95		
Hambro Northern Ireland Venture Partners	12-28-95		
Standard Asset Group	12-28-95		
Consultant: Legg Mason Consulting Group Custodian: BayBank HINGHAM RETIREMENT SYSTEM			
	7-1-90		
Pension Reserves Investment Trust (PRIT) Fund	7-1-90		
HOLYOKE RETIREMENT SYSTEM			
Freedom Capital Management Corporation	12-6-85		
Wellington International Stock Fund	6-14-95		
Womington international Stock I and			
Consultant: Segal Advisors			
Custodian: Baybank			
•			
HULL RETIREMENT SYSTEM			
Strategic Active Management Bond Fund	12-28-95		
Strategic Active Management Stock Fund	12-28-95		
Matrix Equity Commingled Fund	12-28-95		
Custodian: State Street			

LAWRENCE RETIREMENT SYSTEM

National Investment Services of America

BayBank

Custodian:

LEOMINSTER RETIREMENT SYSTEM

Safety Fund National Bank

4-1-85

Consultant:

The Hannah Group

Custodian:

Safety Fund National Bank

LEXINGTON RETIREMENT SYSTEM

Wellington Management Company Fidelity Capital Appreciation Fund Fidelity Contra Fund Fidelity Magellen Fund Fidelity Value Fund Fidelity Fund

1-25-89 3-31-94 3-31-94 3-31-94 3-31-94 3-31-94

Custodian:

BayBank

LOWELL RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund Shurgard Institutional Fund L.P. I Fleet Investment Advisors Metric Apartment Co-Investment Trust Fund (MAC Trust) Charles River Partnership VI-A U.S. Trust Company Heitman Real Estate Fund V L&B Real Estate Counsel Fund IV New England Growth Fund I, L.P. Bank of Ireland Asset Management Int'l Equity Trust

L&B Real Estate Counsel Fund V

Harbor Capital Management

Metric Apartment Co-Investment Trust Fund (MAC Trust)

Wertheim Schroder Investment Services

Federated Short Term Income Fund

Charles River Partnership VII

Brandywine Group Trust Fund

Freedom Capital Management Corporation

Pioneer Ventures, L.P. II

QCI Asset Management

Reservoir Capital Management

North Atlantic Venture Fund II

Consultant: The Hannah Group

Custodian: BayBank

7-10-87 4-6-89 9-14-89 2-8-90 5-2-91 5-22-91 1-14-92 1-14-92 2-19-92 8-5-93 2-3-94 2-3-94 2-3-94 9-29-94 12-15-94 12-15-94 5-4-95 7-27-95 11-9-95 11-9-95 12-7-95 12-7-95

LYNN RETIREMENT SYSTEM de Burlo Group Palmer Organization III L.P. Met Life Tower Fund J&W Seligman & Company, Inc. Investment Advisors, Inc. Freedom Capital Management Corporation Smith Barney International Equity Collective Trust	3-26-85 5-20-87 6-21-95 6-21-95 6-21-95 6-21-95
Consultant: Segal Advisors Custodian: BayBank	
MALDEN RETIREMENT SYSTEM de Burlo Group	3-27-85
Custodian: State Street	
MARBLEHEAD RETIREMENT SYSTEM Pension Reserves Investment Trust (PRIT) Fund	2-1-94
MARLBOROUGH RETIREMENT SYSTEM Freedom Capital Management Corporation Putnam International Trust Metric Apartment Co-Investment Trust Fund (MAC Trust) L&B 90's Investment Program Investment Advisors, Inc.	6-23-88 1-27-94 1-12-95 4-19-95 9-28-95
Consultant: The Hannah Group Custodian: BayBank	
MASS. HOUSING FINANCE AUTHORITY RETIREMENT SYSTEM Freedom Capital Management Corporation Van Kampen Merritt Management, Inc.	3-30-93 3-30-93
Custodian: BayBank	
MASS. PORT AUTHORITY RETIREMENT SYSTEM Wellington Management Company Copley Partners I & II Wellington Trust Company International Portfolio	2-7-85 10-22-86 11-24-89

MASS. PORT AUTHORITY RETIREMENT SYSTEM (continued)

Wellington Mid Cap Portfolio Wellington Small Cap Portfolio 11-9-95 11-9-95

Consultant:

The Hannah Group

Custodian:

Fleet Bank

MASS. TURNPIKE AUTHORITY RETIREMENT SYSTEM

PanAgora Asset Management Wellington Management Company The Boston Company Freedom Capital Management Corporation Oppenheimer Capital Reservoir Capital Management

4-4-94 4-4-94 2-6-95 2-6-95 11-2-95 12-28-95

2-1-88

2-11-88

6-10-93

Consultant:

New England Pension Consultants

Custodian:

Fleet Bank

MASS. WATER RESOURCE AUTHORITY RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund The Boston Company Bank of Ireland Asset Management Int'l Equity Trust Putnam Core Growth Equity Fund L&B 90's Investment Program Metric Apartment Co-Investment Trust Fund (MAC Trust) Equitable Real Estate Prime Property Fund MIG Residential REIT Fund INVESCO, Inc.

6-10-93 4-19-95 4-19-95 4-19-95 5-26-95 8-3-95 10-12-95 9-7-95 9-7-95 9-7-95

Dillon Read Venture Partners III

Pioneer Ventures, L.P. II

Brandywine International Value Equity Portfolio

Boston Capital Ventures III

Consultant: The Hannah Group Custodian: Bank of Boston

MAYNARD RETIREMENT SYSTEM

BayBanks Investment Management, Inc.

BayBank Small Cap Fund

12-4-91 4-19-95

Custodian:

BayBank

MEDFORD RETIREMENT SYSTEM

Fleet Investment Advisors

3-14-85

MEDFORD RETIREMENT SYSTEM (continued)

L&B Real Estate Fund IV Connecticut Investment Management, Inc. Babson-Stewart Ivory International Fund L.P. III Loomis Sayles & Company Glickenhaus & Company Metric Apartment Co-Investment Trust Fund (MAC Trust) RhumbLine Advisers

MIG Residential REIT Fund

Consultant:

The Hannah Group

Custodian:

State Street

MELROSE RETIREMENT SYSTEM

Fleet Investment Advisors EuroPacific Growth Fund

Custodian:

Fleet Bank

METHUEN RETIREMENT SYSTEM

David L. Babson

Consultant:

Segal Advisors

Custodian:

Fleet Bank

MIDDLESEX COUNTY RETIREMENT SYSTEM

Fleet Investment Advisors Oppenheimer Capital

Income Research & Management

INVESCO, Inc.

L&B Real Estate Fund IV

Metric Institutional Apartment Fund I

Metropolitan Life Group Trust

Bank of Ireland Asset Management Int'l Equity Trust

Alliance Capital Management

Commonwealth BioVentures Fund III

Charles River Partnership VI-A

New England Growth Fund I, L.P.

Metric Institutional Apartment Fund II

Rice Mezzanine Lenders III, L.P.

Equitable Real Estate Value Enhancement Fund

Loomis Sayles & Company

Van Kampen Merritt Management, Inc.

Diversified Investment Advisors

3-12-90

8-14-91

7-28-92 7-7-94

7-7-94

1-12-95

7-3-95

7-26-95

4-3-85 3-25-92

10-16-86

3-26-85

8-25-87

9-28-89

9-28-89

2-1-90

2-1-90 2-1-90

1-10-91

1-10-91

3-27-91

4-10-91

2-18-92

2-18-92

2-18-92

12-10-92

12-10-92

12-10-92

3-3-93

Putnam International Trust	
Funan International Trust	4-8-93
Merrill Lynch Asset Management	4-8-93
Harbor Capital Management	7-16-93
J&W Seligman & Company, Inc.	12-2-93
Metric Apartment Co-Investment Trust Fund (MAC Trust)	12-9-93
Corcoran Jennison	1-27-94
Weiss, Peck & Greer Corporate Development IV, L.P.	3-10-94
Loomis Sayles Index Option Overwrite Program	6-9-94
Zero Stage Capital L.P. Fund V	6-30-94
Guinness Flight Global Group Trust	8-4-94
IDS Advisory Group	8-11-94
Pioneer Ventures, L.P. II	10-13-94
Seix Investment Advisors	11-7-94
Bachow and Associates	12-15-94
HSBC Asset Management Pacific Basin Equity Fund	2-22-95
Wellington Emerging Market Portfolio	6-14-95
Standard Asset Group	6-21-95
Freedom Capital Management Corporation	6-21-95
RII Timberland III L.L.C.	6-21-95
Cutler & Company, Inc.	7-26-95
Torch IX Institutional Energy Program	8-31-95
Hambro Northern Ireland Venture Partners	11-30-95
AIB Investment Management Ltd.	12-7-95
North Atlantic Venture Fund II	12-7-95
Phoenix Real Estate Advisors (RESA)	12-28-95

Consultant:	The Hannah Group
Custodian:	Mellon Trust

MILFORD RETIREMENT SYSTEM

BayBanks Investment Management, Inc. BayBank Small Cap Fund

Consultant: New England Pension Consultants
Custodian: BayBank

MILTON RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund

MINUTEMAN REG. SCHOOL DIST. RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund

7-1-86

7-1-85

1-18-89

4-26-95

MONTAGUE RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund

7-1-86

NATICK RETIREMENT SYSTEM

United Investment Counsel Met Life Bond Fund #135

3-14-85 2-15-95

Consultant:

The Hannah Group

Custodian:

BayBank

NEEDHAM RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund

7-1-85

NEW BEDFORD RETIREMENT SYSTEM

Massachusetts Financial Services Aeltus Investment Management, Inc.

Aeltus - Real Estate

Aeltus - International Equity

Pension Reserves Investment Trust (PRIT) Fund

BayBanks Investment Management, Inc.

6-15-89

6-15-89

6-15-89

6-15-89

4-1-92

10-1-92

Consultant:

Wyatt Asset Services, Inc.

Custodian:

BayBank

3-28-85

NEWBURYPORT RETIREMENT SYSTEM

Boston Financial Management, Inc.

Custodian:

State Street

NEWTON RETIREMENT SYSTEM

1838 Investment Advisors

Freedom Capital Management Corporation

David L. Babson

Putnam International Trust

Wellington Domestic Core Bond Portfolio

Wellington U.S. High Yield Portfolio

Wellington International Bond Pool Portfolio

3-19-87 1-21-92

3-19-87

5-27-93

3-8-95 3-8-95

3-8-95

Consultant:

Segal Advisors

Custodian:

Mellon Trust

NORFOLK COUNTY RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund

11-1-85

NORFOLK COUNTY	RETIREMENT	SYSTEM	(continued)
----------------	------------	---------------	-------------

Wellington Management Company
Investment Advisors, Inc.
Loomis Sayles & Company
Thompson, Siegel & Walmsley
Keystone Investment Management Corporation
RhumbLine Advisers
Bank of Ireland Asset Management Int'l Equity Trust
Guinness Flight Global Group Trust

6-24-93 12-9-93 12-23-93 12-30-93 1-27-94 7-7-94 3-8-95 3-8-95

Consultant: Custodian: The Hannah Group Bank of Boston

Custouturi. Built of Boston

NORTH ADAMS RETIREMENT SYSTEM

de Burlo Group

3-25-85

Custodian:

Fleet Bank

NORTH ATTLEBORO RETIREMENT SYSTEM

PaineWebber Properties III
PaineWebber Properties II
PaineWebber Independent Living Mortgage Fund
Fleet Investment Advisors
Babson-Stewart Ivory International Fund L.P. III
RhumbLine Group Trust
Freedom Capital Management Corporation

10-27-88 6-22-89 7-13-89 12-26-90 12-26-91 10-1-92 2-11-93

Consultant:

The Hannah Group

Custodian:

BayBank

NORTHAMPTON RETIREMENT SYSTEM

de Burlo Group

4-18-85

Custodian:

BayBank

NORTHBRIDGE RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund

1-1-88

NORWOOD RETIREMENT SYSTEM

Dean Witter Realty Yield Plus EuroPacific Growth Fund David L. Babson 11-2-89 1-7-92 10-27-94

NORWOOD RETIREMENT SYSTEM (continued)

Boston Company

Legg Mason Capital Management

10-27-94 11-17-94

Consultant:

William M. Mercer

Custodian:

BayBank

PEABODY RETIREMENT SYSTEM

Freedom Capital Management Corporation

7-8-85

Custodian:

BayBank

PITTSFIELD RETIREMENT SYSTEM

Freedom Capital Management Corporation

6-15-89

Custodian:

Bank of Boston

PLYMOUTH RETIREMENT SYSTEM

Morgan Grenfell Investment Trust

Templeton Institutional Fund, Foreign Equity Series

Bankers Trust Investment Management

Loomis Sayles & Company

Eaton Vance Management

7-7-94 7-7-94

11-17-94

12-22-94

6-21-95

Consultant:

New England Pension Consultants

Custodian:

State Street

PLYMOUTH COUNTY RETIREMENT SYSTEM

L&B Real Estate Counsel III

Babson-Stewart Ivory International Fund L.P. III

Shurgard Institutional Fund L.P. I

Metric Institutional Apartment Fund I

Charles River Partnership VI-A

Shurgard Storage Centers

New England Growth Fund I, L.P.

Internal - John McLellan

Corcoran Jennison Apartment Fund

Metric Apartment Co-Investment Trust Fund (MAC Trust)

Charles River Partnership VII

Bank of Ireland Asset Management

Keystone Investment Management Corporation

Van Kampen American Capital Management

Fleet Investment Advisors

Wellington International Stock Fund

5-4-89

5-4-89

5-4-89 10-5-89

3-26-91

1-14-92 7-1-92

12-9-93

1-27-94

1-27-94 10-27-94

3-1-95

3-1**-**93

3-15-95

3-22-95

3-30-95

PLYMOUTH COUNTY RETIREMENT SYSTEM (continued)

Brandywine International Value Equity Portfolio New England Growth Fund II, L.P. 6-14-95 11-9-95

Consultant: The Hannah Group

Custodian: State Street

QUINCY RETIREMENT SYSTEM

Massachusetts Financial Services
Pension Reserves Investment Trust (PRIT) Fund
RhumbLine South Africa Free Group Trust
Freedom Capital Management Corporation
Aeltus Investment Management - DAM Account
Durkee Capital Advisors

2-9-89 3-1-90 3-13-92 11-17-94 5-4-95 5-4-95

Custodian: State Street

READING RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund

6-1-88

REVERE RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund

10-3-94

SALEM RETIREMENT SYSTEM

Freedom Capital Management Corporation
PaineWebber Properties III
1838 Investment Advisors
Bank of Ireland Asset Management Int'l Equity Trust

11-17-88 11-17-88 4-12-90 8-4-94

Consultant: The Hannah Group

Custodian: BayBank

SAUGUS RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund

7-1-86

SHREWSBURY RETIREMENT SYSTEM

Income Research & Management
Putnam Core Growth Equity/Derivatives Free Trust
Putnam International Trust
Julius Baer Government Bond International Portfolio

7-29-93 7-29-93 1-27-94 12-22-94

Consultant: The Hannah Group Custodian: Bank of Boston

SOMERVILLE RETIREMENT SYSTEM

BayBanks Investment Management, Inc. Standish, Ayer & Wood Loomis Sayles & Company Lazard Freres International Equity Fund Standish, Ayer & Wood Fixed Income Fund

2-19-92 4-15-92 3-25-93 6-30-94 8-17-95

Custodian:

BayBank

SOUTHBRIDGE RETIREMENT SYSTEM

Freedom Capital Management Corporation INVESCO ADR International Fund

11-9-89 4-13-95

Consultant:

Segal Advisors State Street

SPRINGFIELD RETIREMENT SYSTEM

Custodian: State Street

BayBanks Investment Management, Inc. Freedom Capital Management Corporation MassMutual Life Insurance Company Wellington Management Company 1-2-92

1-2-92

1-2-92

1-2-92

Consultant:

Wyatt Asset Services, Inc.

Custodian:

BayBank

STATE EMPLOYEES' RETIREMENT SYSTEM

The State Employees' Retirement System invests in the MASTERS Trust Fund Managed by the Office of the Treasurer. See list of investment managers for the MASTERS Trust.

STATE TEACHERS' RETIREMENT SYSTEM

The State Teachers' Retirement System invests in the MASTERS Trust Fund Managed by the Office of the Treasurer. See list of investment managers for the MASTERS Trust.

STONEHAM RETIREMENT SYSTEM

L&B Real Estate Property Fund III
L&B Real Estate Property Fund IV
Independence Investment Associates
Bank of Ireland Asset Management Int'l Equity Trust
Income Research & Management

11-17-88 1-15-91

12-10-91 3-24-94

6-23-95

Consultant:

The Hannah Group

Custodian:

SWAMPSCOTT RETIREMENT SYSTEM

de Burlo Group

Freedom Capital Management Corporation

Custodian:

Fleet Bank

3-27-85 11-30-95

6-25-85

12-21-89

5-16-90

8-31-94

10-19-95

TAUNTON RETIREMENT SYSTEM

U.S. Trust Company
L&B Real Estate Fund IV
EuroPacific Growth Fund

Wellington WTC-CIF International Stock Portfolio

Apodaca-Johnston Capital Management

Consultant:

Segal Advisors

WAKEFIELD RETIREMENT SYSTEM

Custodian:

U.S. Trust

Pension Reserves Investment Trust (PRIT) Fund

7-1-85

WALTHAM RETIREMENT SYSTEM

BayBanks Investment Management, Inc.

BayBank Small Cap Fund

2-11-85 4-13-95

Custodian:

BayBank

WATERTOWN RETIREMENT SYSTEM

L&B Real Estate Property Fund III

INVESCO, Inc.

Wellington CIF Small Cap 2000

BayBanks Investment Management, Inc.

Putnam International Trust

10-5-89 10-5-89 3-20-91

3-8-95 3-8-95

Consultant:

Dahab Associates, Inc.

Custodian:

BayBank

WEBSTER RETIREMENT SYSTEM

Aeltus - Real Estate

Loomis Sayles & Company

6-26-91 2-24**-**94

Custodian:

WELLESLEY RETIREMENT SYSTEM

Standish, Ayer & Wood Standish Small Equity Fund State Street Research & Management Company Consolidated Investment Corporation Standish International Fixed Income Fund Standish International Equity Fund Scudder Investor Services

2-27-85 11-17-88 1-23-90 1-2-91 5-8-91 11-17-94 11-17-94

Consultant:

William M. Mercer

Custodian:

Fleet Bank

WESTFIELD RETIREMENT SYSTEM

PaineWebber Properties III PaineWebber Properties II Freedom Capital Management Corporation State Street Research & Management Company Loomis Sayles & Company

11-17-88 9-14-89 10-16-90 10-16-90 1-21-93

Custodian:

BayBank

WEST SPRINGFIELD RETIREMENT SYSTEM

Fleet Investment Advisors

2-21-86

Custodian:

Fleet Bank

WEYMOUTH RETIREMENT SYSTEM

Pension Reserves Investment Trust (PRIT) Fund

10-1-84

WINCHESTER RETIREMENT SYSTEM

Freedom Capital Management Corporation J.L. Kaplan Associates Rowe Price Fleming Foreign Equity Fund Warburg Pincus International Equity Fund

4-26-90 10-28-93

Sogen Overseas Fund

2-8-95 2-8-95 6-21-95

Custodian:

BayBank

WINTHROP RETIREMENT SYSTEM

Bear Stearns Asset Management

7-29-93

Custodian:

WOBURN RETIREMENT SYSTEM

David L. Babson Keystone Investment Management Corporation Pension Reserves Investment Trust (PRIT) Fund

3-21-88 3-8-95 11-1-95

Custodian: 1

BayBank

WORCESTER RETIREMENT SYSTEM

Fleet Investment Advisors
State Street Research & Management Company
Metropolitan Life Insurance RE Closed End Fund
BEA Associates, Inc.
Bank of Ireland Asset Management Int'l Equity Trust
Investment Advisors, Inc.
New England Growth Fund I, L.P.
Fleet Investment Advisors
Rice Mezzanine Lenders III, L.P.
David L. Babson
Merrill Lynch Asset Management
Putnam International Fixed Income Trust
MIG Residential REIT
Equitable Value Enhancement Fund
Metric Apartment Co-Investment Trust Fund (MAC Trust)
L&B Property Fund IV
Taylor Investments
Pioneer Ventures, L.P. II
Boston Capital Ventures III
Dillon Read Venture Partners III
Equitable Value Enhancement Fund II LLC
Hutchens Investment Management
Loomis Sayles & Company
L&B 90's Investment Program

1-14-87 3-6-91 3-6-91 8-15-91 8-15-91 3-11-92 3-11-92 3-11-92 3-11-92 7-30-92 2-12-93 7-26-93 7-29-93 7-29-93 7-29-93 8-19-93 9-30-93 10-13-94 11-7-94 12-22-94 9-21-95 10-19-95 11-30-95 12-28-95

Consultant:

The Hannah Group

Custodian:

State Street

WORCESTER COUNTY RETIREMENT SYSTEM

Wellington Management Company
Harbor Capital Management
David L. Babson
Bank of Ireland Asset Management Int'l Equity Trust
Freedom Capital Management Corporation
Pioneer Ventures, L.P. II
TA Realty Associates Fund III

8-21-91 9-8-93 9-8-93 9-8-93 9-15-93 9-29-94

9-29-94 9-29-94 10-6-94 4-26-95 7-19-95

WORCESTER COUNTY RETIREMENT SYSTEM (continued)

Putnam Horizon Management Trust
Allmerica Asset Management
Loomis Sayles & Company
Wellington Mgmt. U.S. High Yield Port./International Bond Pool Port.
Zero Stage Capital L.P. Fund V

Consultant: Segal Advisors

Custodian: BayBank

The PENSION RESERVE INVESTMENT TRUST (PRIT) Fund has retained the following investment managers as of December 31, 1995:

Domestic and International Equity Managers:

Alliance Capital Management, L.P.
Banker's Trust Company
Batterymarch Financial Management
Brown Capital Management, Inc.
Capital Guardian Trust Company
Cursitor Eaton Asset Management (TCW)
Emerging Markets Management
Fidelity Management Trust Company
Kennedy Capital Management, Inc.
Massachusetts Financial Services Company
Pareto Partners
Putnam Advisory Company
Rhumbline Advisers
State Street Global Advisors
ValueQuest, Ltd.

Domestic and International Fixed Income Managers:

Bankers Trust Company
Baring International Investment, Ltd.
Fidelity Management Trust Company
W.R. Huff Asset Management Company
Pacific Investment Management Company
Putnam Advisory Company
Rothschild International Asset Management, Ltd.

Real Estate Managers:

Aldrich, Eastman & Waltch, Inc.
Bear Stearns Realty Partners
Boston Financial Group, Inc.
Copley Real Estate Advisors, Inc.
Equitable Real Estate Investment Management
Hancock Real Estate Investment Group
Heitman/JMB Advisory Corporation

Real Estate Managers (cont'd):

Invesco Realty Advisors, Inc. LaSalle Advisors Limited RREEF America L.L.C. TA Associates Realty TCW Realty Advisors

Domestic and International Venture Capital and Special Equity Partnerships:

Advent International

Arral Pacific Management, Lt.

Alan Patricof Associates, Ltd.

Belmont Capital Partners II Fund

The Blackstone Group

Wm. Blair Mezzanine Capital Management

Boston Ventures Management, Inc.

Capital Resource Lenders

Commonwealth BioVentures, Inc.

Commonwealth Capital Partners

CVC European Equity Partners, L.P.

Davis Venture Partners

Dominion Ventures

Donaldson, Lufkin & Jenrette Merchant Banking Partners

1818 Fund

Equitable Capital Management Corporation

Forstmann Little & Company

Freeman Spogli Equity Partners

Golder, Thoma and Cressey

Hancock Venture Capital Management, Inc.

Hellman & Friedman Capital Parnters

Invexco, Inc.

Joseph Littlejohn & Levy Fund

Kohlberg, Kravis & Roberts and Company

Landmark Equity Partners

Madison Group, L.P.

Domestic and International Venture Capital and Special Equity Managers (cont'd):

Massachusetts Technology Development Corporation
Morgan Holland Partners
Nash, Sells & Partners, Ltd.
Schroder Ventures
Smith Offshore Exploration Company
Southern California Ventures
T.A. Associates
Thomas H. Lee Equity Partners, L.P.
Venture Capital Fund of New England
Vista Partners
Welsh, Carson, Anderson & Stowe
Willis Stein & Partners

Consultants

Pathway Capital Management The Townsend Group Morris & Morse Company, Inc. Wilshire Associates, Inc.

Custodian

State Street Bank and Trust Company

The MASTERS Trust has retained the following external investment managers as of December 31, 1995:

DOMESTIC EQUITY MANAGERS

Alliance Capital
Capital Technology, Inc.
Chancellor Capital
Dimensional Fund Advisors
Emerging Growth
Fidelity Management Trust Company
Goldman Sachs Company
Independence
Lazard Freres Asset Management
Massachusetts Financial Services
Numeric Investors
State Street Global Advisors
Target Investors, Inc.

INTERNATIONAL EQUITY MANAGERS:

BEA Associates
Fidelity Management Trust Company
HSBC Asset Management Hong Kong
PanAgora Asset Management

FIXED INCOME MANAGERS:

Danson & Neuhar
Dodge & Cox
GW Capital
Income Research and Management
Loomis Sayles
Morgan Grenfell
Massachusetts Financial Services
The Putnam Companies

FIXED INCOME MANAGERS (cont'd):

Sentry Financial Corporation Solon Asset Management Trust Company of the West Wedgewood Capital Management Wells Fargo Institutional

CONSULTANT:

Wilshire Associates, Inc.

CUSTODIAN:

Mellon Trust

PENSION INVESTMENT ADVISORY UNIT

ROBERT P. SHAW

Director

VICTORIA MARCORELLE

Supervisor

ROSAMOND C. COTTER

Fund Accountant

KEVIN D. MORRISON

Examiner

ROSE CIPRIANI

Administrative Assistant

DIVISION OF PUBLIC EMPLOYEE RETIREMENT ADMINISTRATION

ONE ASHBURTON PLACE, ROOM 1101 BOSTON, MA 02108 (617) 727-9380